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Stress Prevention and Mindfulness: A Psychoeducation and Support Group for Teachers

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Stress Prevention and Mindfulness: A Psychoeducation and Support Group for Teachers

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Dedication

To the students, teachers, and teacher-leaders with whom I have worked in New York City, Tulsa, Austin, and beyond. I am humbled and grateful.

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Stress Prevention and Mindfulness: A Psychoeducation and Support Group for Teachers

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The University of Texas at Austin, 2017

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A stress prevention and mindfulness (SPAM) group is described, which is a short-term (6-8 week) psychoeducation and support group for teachers. The SPAM group provided information on stress and its impact, utilized elements of Mindfulness-Based Stress Reduction (MBSR), and emphasized group process and support. Four SPAM groups were implemented with teachers and their colleagues at three public schools in the Southwest. Evaluation was conducted with quantitative (pre- and post-measures of teacher vulnerability to stress, job satisfaction, and mindfulness) and qualitative (post-intervention interviews) elements using a quasi-experimental mixed methods design. Participants in the intervention group reported higher mindfulness scores than participants in the comparison group, and qualitative analyses were supportive of teachers' satisfaction with the group. Implications and future research directions are discussed.

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Introduction

Teaching is an indispensable profession: society depends on teachers to facilitate the learning and growth of younger generations. However, while many who enter the field consider teaching a calling, a number of factors make teaching a stressful profession. Workload, time demands, disruptive student behavior, and organizational factors have all been cited as sources of stress for teachers (Blase, 1986; Boyle, Borg, Falzon, & Baglioni, 1995; Feng, 2010), and recent educational accountability standards have only added to the demands placed upon them (Lambert, McCarthy, Crowe, McCarthy & Fisher, 2012).

As applied to teachers, transactional models of stress (Lazarus & Folkman, 1984) propose that teachers whose perceived demands outweigh their perceived resources are most vulnerable to stress (Chang, 2009; Steinhardt, Jaggars, Faulk, & Gloria, 2011). In a meta-analysis of 18 studies using the transactional model in educational settings, researchers found that teachers at high risk for occupational stress had lower job satisfaction, higher burnout symptoms, and reduced occupational commitment (McCarthy, Lambert, Lineback, Fitchett, & Baddouh, 2015). Indeed, chronic stress is widely credited for the pattern of teachers entering then leaving the profession for reasons other than retirement (Ingersoll, 2001; Klassen & Chiu, 2011), and compared with other occupational fields, turnover is particularly high for novice teachers (Gray & Brauen, 2013; Ingersoll, Merrill, & Stuckey, 2014). The Beginning Teacher Longitudinal Study (BTLS), a nationally representative longitudinal survey, found that 18% of teachers leave after the first five years (Gray & Taie, 2015), and teaching demands play an important role. Using data from the BTLS, researchers found that teachers who perceived that their teaching demands exceeded their teaching resources were approximately twice as likely

to leave their current school as novice colleagues without such an imbalance (McCarthy, Fitchett, Lambert, Lineback, & Boyle, under review) which may have harmful consequences for schools, students, and the communities they serve (Hong, 2012; Ronfeldt, Loeb, & Wyckoff, 2013).

With considerable evidence that vulnerability to stress is related to lower job satisfaction and higher turnover, it is critical to explore interventions designed to address occupational stress and promote teacher wellbeing. The purpose of this study was to examine the effects of a stress prevention and mindfulness (SPAM) intervention, a brief psychoeducation and support group designed to help teachers understand, prevent, and cope effectively with job-related stress. The study also adds to the existing research on mindfulness-based interventions (MBIs) with teachers and builds upon its pilot project detailed in Reiser, Murphy, & McCarthy (2016), which was supportive of its use with teachers.

STRESS AND MINDFULNESS INTERVENTIONS

Meta-analyses suggest that stress management training is effective in reducing employee stress in a variety of occupational settings (Richardson & Rothstein, 2008; Van der Klink, Blonk, Schene, & Van Dijk, 2001). In educational settings, researchers have argued the importance of intervening directly with teachers, by offering stress management programs, wellness trainings, and/or physiological training (Kipps-Vaughan, 2013). Recent studies on stress management programs for teachers have found success in a range of techniques including relaxation therapy, meditation, stress inoculation training, and mindfulness (Cecil & Forman, 1990; Crain, Schonert-Reichl, & Roeser, 2016; Flook, Goldberg, Pinger, Bonus, & Davidson, 2013; Kaspereen, 2012; Sharp & Jennings, 2016; Winzelberg & Luskin, 1999).

Mindfulness is a popular intervention for stress, and is a practice rooted in Buddhist philosophy that involves paying attention to the present moment, intentionally and non-judgmentally (Kabat-Zinn, 1994). Current research suggests that individuals high in mindfulness display higher social well-being (Howell, Digdon, Buro, & Sheptycki, 2008; Prazak, Critelli, Martin, Miranda, Purdum, & Powers, 2012) and psychological and cardiovascular health (Prazak et al., 2012), as well as lower anxiety and negative emotions (Baer, Smith, & Allen, 2004; Miller, Fletcher, & Kabat-Zinn, 1995; Prazak et al., 2012).

Research suggests that mindfulness-based interventions (MBIs) are associated with reductions in stress (Brown, Ryan, & Creswell, 2007; Burke, 2010; Fortney, Luchterhand, Zakletskaia, Zgierska, & Rakel, 2013). In addition to stress reduction, studies suggest that evidence-based MBIs, such as Mindfulness-Based Stress Reduction (MBSR), may also help individuals reduce depression and anxiety (Brown et al., 2007; Burke, 2010; Grossman, Niemann, Schmidt, & Walach, H, 2004; Hofmann, Sawyer, Witt, & Oh, 2010), regulate emotion (Siegel, 2007), and increase perceptions of control (Astin, 1997). MBIs in occupational settings have received increased attention in the past ten years (Irving, Park-Saltzman, Fitzpatrick, Dobkin, Chen, & Hutchinson, 2012; Fortney et al., 2013; Kabat-Zinn & Hanh, 2009; Praissman, 2008) and have been associated with increases in job satisfaction (Hülsheger, Alberts, Feinholdt, & Lang, 2013) and reduced occupational stress and burnout (Flook et al., 2013; Fortney et al., 2013; Goodman & Schorling, 2012).

Mindfulness has made its way into schools in recent years, and studies of MBIs consistently yield promising results with both students (Black, Milam, & Sussman, 2009; Edwards, Adams, Waldo, Hadfield, & Biegel, 2014; Franco, Mañas, Cangas, & Gallego, 2010) and teachers (Benn, Akiva, Arel, & Roeser, 2012; Flook et al., 2013; Gold, Smith,

Hopper, Herne, Tansey, & Hulland, 2010; Roeser, Schonert-Reichl, Jha, Cullen, Wallace, Wilensky, Oberle, Thompson, Taylor, & Harrison, 2013). Randomized control studies have found that after receiving mindfulness training, teachers reported greater mindfulness, self-compassion, focused attention, working memory capacity, and effective teaching behavior, along with lower levels of occupational stress, anxiety, and burnout (Benn et al., 2012; Flook et al., 2013; Roeser et al., 2013).

Qualitative studies have also examined teachers' responses to MBIs and elucidate positive perceptions of the impact of participation in mindfulness training (Reiser et al., 2016; Gold et al., 2010; Napoli, 2004; Sharp & Jennings, 2016). Teachers in these studies reported improved ability to manage conflict and anxiety and increased productivity in the classroom (Napoli, 2004); reduced depression, anxiety, and stress (Gold et al., 2010); and positive shifts in their emotional reactivity and approach to students by using mindfulness skills (Sharp & Jennings, 2016). In the pilot for the current study, over the course of the SPAM group teachers reported that mindfulness as a stress reduction strategy "fit" for them, and they consistently felt "ready and motivated" to apply skills learned in the group. These teachers also reported that the group positively impacted their sense of community with colleagues, interactions with students, and ability to manage stress (Reiser et al., 2016).

GROUP WORK: AMONG COLLEAGUES IN SCHOOLS

While MBIs are commonly offered in a group format (Burke, 2010, Kabat-Zinn, 1994; Newsome, Waldo, & Gruszka, 2012), these and other stress management interventions tend to focus on psychoeducation and the acquisition of skills during sessions, while the role of the group itself is not emphasized. However, research suggests that the group format itself may play a role in such interventions. Group work provides

benefits for members; generating therapeutic factors such as the formation of a safe communal environment and helping members normalize their experience and realize they are not alone (Yalom & Leszc, 2005). In a qualitative study that utilized MBSR with health care professionals in a group setting, Irving and colleagues (2012) found that participants highlighted the importance of the group setting, reporting that feelings of support and mutuality enhanced their experience, as fellow group members normalized the experience of occupational stress and provided support as they learned mindfulness techniques. Likewise, evaluation of the pilot SPAM group for the current study suggested members benefitted from sharing mutual frustrations, processing successes and challenges in practicing mindfulness techniques, and receiving encouragement and support from each other in and outside of the sessions (Reiser et al., 2016).

Teachers in the pilot SPAM group also reported strengthening relationships with colleague group members and felt a greater sense of community at work (Reiser et al., 2016). Considering that most teachers plan, teach, and reflect upon their practice alone – a recent study by Scholastic and the Gates Foundation (2012) found that teachers spend only about three percent of their teaching day collaborating with colleagues – group work among colleagues might serve as a space to foster social support among teachers. Social support has long been identified as a resource that enables individuals to cope with stress (House, 1981), and according to the moderating hypothesis, individuals who have supportive social relationships are able to rely on others to aid them in dealing with stressful situations. Indeed, research suggests that social relationships within the school, such as relationships with colleagues and administrators, are important types of coping resources for educators (Klassen & Chiu, 2011).

While the formation of general, open, teacher support groups in schools would be a cost-efficient method of bringing teachers together in an effort to increase their social

support, research by Mallinckrodt (1989) found that participants in groups with a specific theme perceived greater availability of guidance and support and perceptions of closer attachment bonds to other group members when compared to members of general process groups. These findings lend support for additional exploration of a structured group with for teachers and their colleagues. Generally, there remains a lack of research illuminating the unique impact of participating in a structured psychoeducation and support group among colleagues specifically, as well as how the support function of the group may impact teachers.

Little is known about the recommended format, length, and duration of such trainings, in consideration of teachers' busy workweeks and high accountability for student-level performance outcomes. While MBSR has been shown to be an effective method of reducing stress and increasing wellness for teachers, the typical MBSR program is composed of eight weekly 2.5 hour classes and one day-long class totaling nearly 30 hours of direct instruction (Kabat-Zinn, 2013). Further, studies of mindfulness training with teachers have utilized MBIs with even longer total time spent in sessions (e.g. Benn et al., 2012; Jennings, Snowberg, Coccia & Greenberg, 2011), which may not be practical in many educational settings. In spite of this challenge, Klatt, Buckworth, and Malarkey (2008) found statistically significant reductions in stress and increases in mindfulness for a group of working adults using a six-hour MBI over the course of six weeks, suggesting shorter programs may produce comparable results to longer, more standardized MBIs. Further, Carmody and Baer (2009) examined 23 MBI studies and found no statistically significant correlation between effect size of outcomes and number of intervention hours, providing further evidence in support of more brief interventions. Shorter programs may be more practical for teachers, and researchers agree that more information is needed regarding the relationship between program length and

effectiveness (Roeser, Skinner, Beers, & Jennings, 2012). Further, researchers suggest studies with qualitative components to illuminate issues regarding sustainability at the organizational level (Crain et al., 2016).

While teacher stress and mindfulness-based interventions have gained increasing attention in the literature, researchers have suggested additional empirical studies on mindfulness interventions with teachers, including studies targeting outcomes related to teacher well-being, such as stress and job satisfaction (Roeser et al., 2012). Researchers have also advocated for the use of qualitative and mixed methods designs to inform intervention development and to examine effectiveness (Sharp & Jennings, 2016). More research is needed to explore the efficacy and practicality of facilitating such an intervention in the school setting in consideration of a teacher's busy schedule and heavy demands. In addition, few studies have examined how teachers describe their experiences and perceive the impact of their participation in stress management and mindfulness-based interventions. Finally, few studies have endeavored to leverage the group format of stress management and MBIs, nor have they examined the experience of teachers engaging in group work with their colleagues.

The purpose of this study was to explore the outcomes and experience of a brief stress prevention and mindfulness group, adding to the existing research on MBIs with teachers and extending and expanding upon its pilot study. Quantitative and qualitative data was collected and analyzed to provide a rich understanding of the use of a brief group intervention, which integrated education on stress with mindfulness training in a psychoeducation and support group format. Two overall research questions were as follows: (1) How does an in-school SPAM group impact teachers both broadly and in terms of their vulnerability to stress, job satisfaction, and mindfulness? (2) How do teachers in the SPAM group describe their experiences?

Method

In preparation for the proposed study, the current investigator developed and piloted a preliminary SPAM group with a set of public school teachers at a middle school in the Southwest. Eight teachers were group members and 7 of their colleagues participated in the comparison condition for statistical analyses. Teachers participated in a six-session structured group, which provided psychoeducation on stress and incorporated elements of MBSR. Measures of teacher perceptions of classroom demands and resources, job satisfaction, and mindfulness, along with post-session teacher feedback surveys and a focus group were used in the evaluation of this pilot. Quantitative results were promising (e.g. positive trends in teacher job satisfaction and Observe scale of the FFMQ-SF), but the small sample size limited power to detect treatment effects. A full description of the implementation of this pilot group can be found in Reiser et al., 2016.

Several changes were made in preparation for the current study. Changes to the structure and implementation of the group were drawn from group member feedback and included: increasing the number of sessions from six to eight, reorganizing the mindfulness strategies so that more basic techniques were introduced first and grew gradually more challenging, and emphasizing the support function of the group. To increase sample size and account for potential attrition, multiple groups were conducted over the course of a school year, and efforts were made to more clearly inform teachers and administrators about the nature and scope of the SPAM group and to offer the group at a time that worked best for particular schools.

RESEARCH DESIGN

This study was conducted using a mixed methods approach, as mixed methods may provide stronger evidence for results through convergence and corroboration of findings (Greene, Caracelli, & Graham, 1989). Specifically, a concurrent triangulation design was utilized, which involves the concurrent collection of quantitative and qualitative data, equal priority given to both datasets, and the integration of results during interpretation or analysis phases (Creswell, Plano Clark, Gutmann, & Hanson, 2003). For the current study, priority was given to both quantitative and qualitative results, data was analyzed separately, and integration occurred at the interpretation phase.

The quantitative portion of this mixed methods study used nonequivalent comparison-group design. This study was quasi-experimental as contextual factors limited the use of random assignment to treatment and comparison groups. The treatment group was comprised of participants who completed the group: that is, group members who attended more than half of the SPAM group meetings. This cutoff seemed reasonable given the overall pattern of attendance in the pilot study, due contextual factors that made regular attendance a challenge (e.g. student tutoring, meetings, administrative demands). The comparison group was comprised of participants who were teachers at the schools in which the groups were facilitated who either chose not to participate in the SPAM groups or who attended half or less than half of the SPAM group meetings. Pre/posttest data was used to examine teachers' self-reported vulnerability to stress, job satisfaction, and mindfulness.

In addition to the survey data, research questions 1 and 2 were explored through semi-structured interviews with a subset of participants about their experiences in the SPAM group after its conclusion. Using thematic analysis, interview data were analyzed with regard to perceptions of the SPAM group's impact (RQ1) as well as patterns in how

participants described their experiences (RQ2). The combination of quantitative and qualitative methodologies provides a more thorough understanding of the impact and experience of such an in-school intervention with teachers which may be used to inform both theory and practice.

PARTICIPANTS

Participants were 45 teachers from three public schools in the Southwest. Two schools were public charter middle schools, and one school was a public high school. Participation was voluntary, and all teachers at each of the three schools were invited to participate in the study. Twenty-six participants were group members, while 19 participants made up the comparison group used in quantitative analyses. Participant ages ranged from 22 to 51, with a mean age of 31. The median age was 29. Thirty-five participants (78%) were female, and 10 (22%) were male. The race/ethnicity of the participants was 29 (64%) White, 8 (18%) Latino, 4 (9%) Multiracial, 3 (7%) African American/Black, and 1 (2%) Asian. Participants had between 1 and 25 years' teaching experience, with a mean of 5.5 and a median of 4 years teaching experience. Forty-one (91%) of participants had less than 10 years of teaching experience while 4 (9%) of participants had between 16 and 25 years of teaching experience.

As previously mentioned, participants who attended more than half of the group meetings were considered "group members", while participants who completed only the pre/posttest measures or who attended less than half of the group meetings were considered members of the comparison group. A total of four SPAM groups were run across the three schools, two of which were composed of teachers at the high school. The first group, which was the pilot group described in Reiser et al., (2016), was held in the fall of 2014 and included 8 group members. The second group was held in early fall of

2015 and included 8 group members. The third group was held in late fall of 2015 and included 3 group members. The fourth group was held in early spring of 2016 and included 11 group members. While a total of 30 teachers were considered "group members", it should be noted that 4 group members did not complete the posttest measures and were not included in statistical analyses.

A total of 65 participants fully completed the pretest measures, and of these, 45 completed the posttest measures and were included in statistical analyses. Of these 45 participants, 26 were group members, while 19 participants made up the comparison group. Finally, for the qualitative methodology, 8 group members were interviewed after the final SPAM group meeting.

PROCEDURES

Prior to recruiting participants, researchers received institutional review board approval from their institution and approval from school administrators. Two data collection methods were used in the current study. First, measures of teacher vulnerability to stress, job satisfaction, and mindfulness were given to participants before and after the SPAM group, in order to examine the effects of group participation across time. Second, group member interviews were conducted two to three weeks after the final group session to explore participants' experience with the group.

For the quantitative measures, a G-Power 3.1 analysis (Faul, Erdfelder, Buchner, & Lang, 2009) indicated that at least 28 total participants would be needed to obtain a medium effect size of .25, and a power level of .80 with an alpha level of .05. However, 35 participants were sought in order to account for potential attrition. Teachers were made aware of the opportunity to participate in the study approximately 1-2 months prior to the commencement of the SPAM group via their school administrators during

professional development meetings and via email announcements and fliers posted on bulletin boards in teacher workrooms. To maximize participation and reduce attrition for group members, facilitators offered light refreshments during group meetings. In addition, the administrators at one school were able to arrange for group members to receive continuing education credit for their participation in the SPAM group.

One week prior to the first SPAM group meeting, study participants (both those who intended to participate in the SPAM group and those who did not) took the pretest measures. Each SPAM group ran for 6-8 consecutive weeks and met once per week for one hour. Two of the four SPAM groups ran for 8 weeks, while the remaining two groups ran for 6 and 7 weeks due to school-specific scheduling constraints such as holiday breaks. Three of the groups were held in classrooms immediately following student dismissal. In an effort to combat attrition due to after-school responsibilities, the final group was held during the teachers' lunch hour. Within two weeks of the conclusion of the final SPAM session, group members and comparison group participants took the posttest measures. Two to three weeks after the conclusion of the final SPAM session, and after each group's posttest quantitative data was collected, a subset of members from each group was interviewed about their experience participating in the group. Group members indicated their willingness to be interviewed on a brief survey given at the end of the final session. The principal investigator followed up via email to these members, and interviewees were primarily selected based upon member/investigator schedules and availability.

Each group was facilitated by the principal investigator who had experience leading counseling groups in various settings, including co-facilitating experiential growth groups in a group counseling graduate course and using mindfulness with groups in clinical settings. The principal investigator also had experience as a public school

teacher and had several additional years of experience in K-12 public school teacher support and development. Two of the four SPAM groups were co-facilitated by counseling psychology doctoral students who had experience in mindfulness and a university faculty member who specializes in teaching and research in group work.

STRUCTURE AND IMPLEMENTATION OF SPAM GROUP

The SPAM group provided an opportunity for teachers to engage in a psychoeducation and support group among colleagues. The goals of the group were to increase teachers' resources for preventing and managing stress by (a) increasing knowledge of the stress process (e.g. its physical symptoms, relationship to cognition and emotion), (b) introducing and practicing mindfulness skills, and (c) increasing social support by providing a therapeutic group environment. Each session incorporated psychoeducation about stress, cognition, and emotion (e.g. current research on stress among teachers; the stress cycle; physical, cognitive, and emotional warning signals; common thinking errors;) and instruction and practice with mindfulness skills (e.g. body scan; sitting meditation; three-minute breathing space). Group members and facilitators were seated in a circular format, as each session provided opportunities for group processing and/or partner exercises, and sharing experiences was encouraged throughout. Group exercises were structured such that group members collaborated and processed with each other to facilitate cohesion, mutual support, and reduce interpersonal distance. Between sessions, teachers were encouraged to practice the skills they learned via recommended homework exercises.

A subset of the mindfulness materials was adapted from the Optimize Your Potential program offered at the University of Texas at Austin (2014), an eight-week MBI based on the work of Jon Kabat-Zinn and the University of Massachusetts MBSR

program (Kabat-Zinn, 2013). Because the SPAM group was conducted in considerably less time than traditional MBSR groups, material was selected based on its applicability to teachers and feasibility for an hourly group lasting 6-8 weeks. Original psychoeducation materials, group activities, and homework assignments were also created to supplement the selected curriculum materials.

INTERVENTION SCOPE AND SEQUENCE

The following is a brief description of the eight group sessions that were offered. It should be noted that while all four groups followed a similar scope and sequence, sessions 5 and 6 were collapsed and condensed for the groups that were limited to 6 and 7 weeks in duration. Sessions 3 and 4 were also collapsed and condensed for the group that was limited to only 6 weeks in duration. For additional information about the 6-week SPAM group scope and sequence see Reiser et al. (2016).

Session 1: Introduction to Teacher Stress and Mindfulness. This session provided an overview of mindfulness and an introduction to teacher stress research. Facilitators led teachers in a discussion of the transactional model of stress; specifically how stress may be seen as the result of an imbalance of demands and resources. Teachers were asked to explore their specific personal and professional demands via an activity in which teachers created pie charts on paper plates displaying their various demands. Teachers then explored the resources at their disposal to meet the demands on their plates. Teachers also examined their unique physical, behavioral, emotional, cognitive, spiritual, and relational stress signals. Facilitators introduced the concept of mindfulness and led teachers in a mindful eating exercise. At the end of the meeting, group members processed the mindful eating exercise and facilitators introduced the homework.

Session 2: The Stress Response: Breaking the Cycle. This session introduced teachers to the stress cycle; specifically how interactions among physical sensations, thoughts, feelings, and behaviors contribute to the negative stress cycle. Teachers engaged in an activity in which they reflected upon a stressful situation and how they responded cognitively, emotionally, physically, and behaviorally. Facilitators led teachers in a discussion on breaking the negative stress cycle by learning to increase awareness of these responses and choosing to respond rather than react to stressful situations. Facilitators then introduced and led teachers in a mindful sitting exercise, followed by processing and an introduction to the homework.

Session 3: Stress and Thinking. This session introduced teachers to the nature of thoughts and unhelpful thinking patterns. Teachers engaged in an activity in which they identified types of unhelpful thoughts unique to them and relative to their experiences at school. Facilitators emphasized increasing awareness of thoughts and emotions during times of stress. Teachers also engaged in an activity in which they wrote their thoughts on post its and dropped each one on the floor. The session closed with a mindfulness activity whereby teachers visualized themselves sitting on a cloud and watching their thoughts pass. The group concluded with processing the mindfulness activity and introducing the homework.

Session 4: Stress and Emotion. Session 4 oriented teachers to the nature of emotions. Teachers were given a list of emotion words and engaged in an activity in which they reflected upon which emotions they welcome, tolerate, and fight. After processing with a partner, facilitators engaged members in a group discussion about the nature of emotions and how using mindfulness to increase awareness and acceptance of emotions may reduce suffering. The session ended with a mindfulness exercise in which they focused on a difficult situation and were encouraged to experience and accept the

accompanying emotion. The group concluded with processing the mindfulness activity and introducing the homework.

Session 5: Mindful Communication. Facilitators provided psychoeducation on mindful communication and various communication styles. Teachers were asked to identify their style and styles of others during a small group activity. Facilitators then led teachers in a discussion and activity focused on universal human needs. Teachers then worked in partners to practice assertive communication and expression of needs. The session concluded with a mindfulness exercise whereby teachers visualized their thoughts, feelings, and physical sensations passing beneath them on train cars. Teachers then processed the mindfulness activity and facilitators introduced the homework.

Session 6: Mindful Communication cont. This session began with a three-minute breathing space activity led by one of the teachers. Teachers engaged in an activity on mindful communication, explored how unmet needs contribute to judgments of others, including students and colleagues. Facilitators then introduced the Four Part Conversation as a strategy for communicating unmet needs with others. Teachers role-played the Four Part Conversation with partners and members processed the activity with the group. This session concluded with a three-minute breathing space, processing, and an introduction to the homework.

Session 7: Mindfulness for Stress Reduction. Session 7 began with a brief review of each of the mindfulness exercises introduced in the SPAM group, and teachers processed their challenges and successes with each of them. Teachers then discussed how deliberate mindfulness practice could be used as a coping strategy in high stress moments. Facilitators emphasized the adoption of a gentle and curious attitude toward distressing thoughts and emotions as an alternative to avoidance during stressful classroom situations. The session continued with a member-led body scan. The session

closed with a round in which teachers shared a gratitude and facilitators introduced the homework.

Session 8: Group Termination and Resources. The final session encouraged teachers to reflect upon the knowledge and skills they have gained via participation in the SPAM group. Mindfulness strategies were reviewed and clarified as needed. Teachers then engaged in an activity in which they had to keep several balloons in the air and then processed how the activity felt physically, emotionally, and relationally. Facilitators provided access to resources for group members to continue to learn and practice the skills acquired. Teachers engaged in a discussion of how they wanted to move forward as a community of colleagues. Facilitators led group members in processing the termination of the group.

EVALUATION OF THE GROUP

This mixed-methods quasi-experimental study includes analysis of quantitative data collected from measures given before and after the SPAM group, along with a qualitative analysis of interviews with a subset of group members. Measures of classroom demands and resources, job satisfaction, and mindfulness were given to participants pre- and post-group, and are described below. Two weeks after the final SPAM session, semi-structured interviews were held with 8 group members from three of the SPAM groups, which were subsequently analyzed for major themes. This mixed-methods approach aimed to provide depth to the constructs measured in the quantitative analysis and to address the second research question regarding how teachers describe their experience participating in the group.

MEASURES

Vulnerability to stress. The Classroom Appraisal of Resources and Demands (CARD) (Lambert, O'Donnell, McCarthy, & Wang, 2009) was developed to assess teachers' vulnerability to stress by examining perceptions of a teacher's demands and resources. The CARD is divided into two scales: Demands and Resources. Items on each scale ask teachers to rate the severity of demands and the helpfulness of various resources associated with aspects of the classroom environment using a five point Likert scale that ranges from 1, "Not Demanding", to 5, "Extremely Demanding," and "Very Unhelpful," to "Very Helpful," respectively. The CARD assigns participants a "Demand" score and a "Resource" score. Following procedures used by Lambert (2009), an additional score was created by calculating the difference between the Demands score and the Resources score. This difference score, labelled an Appraisal Index (AI), represents a teacher's overall appraisal of whether their classroom resources are sufficient to meet the magnitude of classroom demands. In this study, changes in Appraisal Index scores were used to examine changes in vulnerability to stress. The CARD has been used in a number of studies with teachers across various grade levels (McCarthy et al., 2015), and each study has demonstrated sample-specific reliability evidence and validity evidence for the CARD. In the current study, Chronbach's alpha for the demand scale was .863 (pretest) and .865 (posttest). Chronbach's alpha for the resources scale was .943 (pretest) and .866 (posttest).

Job satisfaction. Teachers were also given a 14-item Job Satisfaction scale, which was originally developed by Koeske and colleagues (1994) to assess human service workers' satisfaction along a range of dimensions (e.g., working conditions, organizational climate, salary, etc.). This measure asks participants to rate their satisfaction with each dimension on a seven-point Likert scale from 1, "Very

Dissatisfied," to 7, "Very Satisfied". The scale was adapted by McCarthy, Lambert, Crowe, and McCarthy (2010) for use with teachers. Cronbach's alpha for the current study was as follows: pre (.893), post: (.935).

Mindfulness. The Five Facet Mindfulness Questionnaire Short Form (FFMQ-SF; Baer, Smith, Hopkins, Krietemeyer & Toney, 2006; Bohlmeijer, Peter, ten Klooster, Fledderus, Veehof, & Baer, 2011) is a 24-item validated scale measuring five unique but related aspects of mindfulness. These facets include observing (attending to or noticing experiences such as sensations, emotions, cognitions, etc.), describing (noting or mentally labeling these experiences with words), acting with awareness (attending to one's current actions, as opposed to behaving automatically or mindlessly), non-judging of inner experience (refraining from evaluating sensations, cognitions, and emotions) and non-reactivity to inner experience (allowing thoughts and feelings to come and go without getting caught up in them). Responses are rated on a 5-point Likert scale ranging from "never or rarely true" (1) to "very often or always true" (5). Consistent with procedures used in other mindfulness studies with teachers (e.g. Benn et al., 2012; Crain et al., 2016), a total mindfulness scale score was calculated at each time point based on the mean of these 24 items, and higher scores indicate higher degrees of mindfulness. In the current study, these scales were statistically reliable across time points with Cronbach's alpha for all subscales at pre and posttest ranging from .71 to .905.

ANALYSES

The quantitative methodology utilized a quasi-experimental design to investigate the first research question, in which the researchers were interested in exploring change over time between treatment and comparison groups regarding teachers' vulnerability to stress, job satisfaction, and mindfulness. Quantitative data were analyzed using IBM

Statistical Package for the Social Sciences 19.0 (SPSS: Chicago, IL). Pretest differences between group members and comparison groups were assessed for equivalence using independent samples t-tests. Between-group differences from pretest to posttest were tested using analysis of covariance (ANCOVA), with pretest values of the dependent variables included as covariates. In consideration of the small sample size in this study, researchers used between-group comparison effect sizes as an indicator of the strength of intervention effects.

A qualitative component of this study was employed because of the limited sample and context of the study and so that both research questions could be studied in greater depth. An instrumental case study approach was selected to provide insight into the impact and experience of such a group (Mills, Durepos, & Weibe, 2010). This case study of the implementation of such a group may inform the theory and practice of using brief psychoeducation and support groups focused on stress and mindfulness with teachers. A semi-structured interview method was chosen for its ability to facilitate analysis, comparison, validity checks, and triangulation, and its ease of administration in case study research (Mills et al., 2010). Interviewees were first asked to describe their experience in the SPAM group, followed by questions regarding group culture and their perceptions of the group's impact on their professional and personal lives.

A detailed account and analysis of interviews was conducted using thematic analysis, which is used to identify and analyze themes across a data set (Braun & Clarke, 2006) and has been used in studies of mindfulness in educational settings (e.g. Sharp & Jennings, 2016). Thematic analysis is particularly useful in case study research as it allows the researcher to conduct a thorough exploratory, descriptive, or explanatory case analysis, grounded in the specifics of the case (Mills et al., 2010) and described in rich detail. An inductive approach to the analysis was taken such that themes emerged from

and were grounded in the data itself. Finally, a semantic analytic approach was utilized, as the focus centered upon explicit meanings of semantic content in interview transcripts.

Following protocol developed by Braun and Clarke (2006), this approach began with the collection and transcription of interviews and familiarization with the data. The next step was to identify key ideas and concepts that formed the basis of an initial coding framework, which was then independently applied to the interview transcripts by the researcher. Once data was coded, it was reread and recoded as necessary. Next, categories of codes were generated and then examined for patterns. Prevalence was determined at the unique interviewee level. Thematic findings in the data were identified and subsequently reviewed and refined, and validity of individual themes and subthemes were reconsidered in relation to the dataset as a whole. Finally, themes were further analyzed, named, and defined.

Results

QUANTITATIVE

Because contextual factors limited the use of random assignment to intervention and control conditions, a natural comparison condition was compared to group members (intervention group) in the quantitative component of this quasi-experimental design. Intervention group and comparison condition characteristics are presented in Table 1, and no statistically significant differences were found between participant characteristics and the study variables. Pretest differences between group members and the comparison condition were assessed using independent samples t-tests. There were no statistically significant differences in pretest scores; thus the intervention group and comparison condition were considered equivalent. Effects sizes were calculated using both eta squared and Hedges' g, a variation of Cohen's d that corrects for biases due to small sample sizes (Hedges & Olkin, 1985). The magnitude of Hedges' g has been interpreted using Cohen's (1988) conventions of small (0.2), medium (0.5), and large (0.8) in previous studies examining the impact of MBIs (e.g. Benn et al., 2012; Hoffman et al., 2010).

Table 1: Participant Characteristics

	Intervention Group N = 26	Comparison Condition N = 19
Women: N (%)	20 (77)	15 (79)
Age: Mean (SD)	30.08 (6.53)	32.26 (6.28)
Years teaching: Mean (SD)	5.04 (5.74)	6.26 (5.74)

The first research question focused on measuring the impact of the SPAM group on teachers' vulnerability to stress, job satisfaction, and mindfulness. Results of the

ANCOVA are listed in Table 2. Though scores improved for both sets of teachers over time, there were no statistically significant differences over time between mean scores for group members (N=26) and participants in the comparison condition (N=19) for either the CARD Appraisal Index $F(1, 42) = .012$, $p = .913$ or job satisfaction $F(1, 42) = .533$, $p = .470$. While not statistically significant, the change in job satisfaction scores from pretest to posttest was greater for group members (M = 71.42 vs. M = 75.08) than for participants in the comparison condition (M = 71.70 vs. 73.37) with a small effect size ($g^* = .31$). Finally, there was a statistically significant main effect of the intervention on mindfulness, $F(1, 37) = 5.55$, $p < .05$, with a high-medium effect size ($g^* = .74$; $\eta 2 = .13$), indicating that group members' (N= 24) mindfulness increased as compared to the comparison group (N=16). Though not statistically significant, mean scores of mindfulness decreased from pre to posttest for the comparison group (M = 76.88 vs. M = 75.81).

Table 2: Pre- and Post-test Means and Standard Deviations by Condition

		Intervention Group			Comparison Condition				
Measure		Pre	Post	Post adj.	Pre	Post	Post adj.	ES (g*)	ES (η2)
CARD	Mean	-2.16	-3.53	-2.42	1.66	-.50	-2.03	-.10	.00
AI	SD	12.86	14.77		14.69	13.37			
	N	26	26		20	19			
FFMQ	Mean	74.88	80.13*	80.64	76.88	75.81	75.04	.74	.13
	SD	6.91	9.32		7.14	6.99			
	N	24	24		16	16			
Job Satis	Mean	71.42	75.08	75.19	71.70	73.37	73.21	.31	.01
	SD	11.51	13.00		13.70	15.60			
	N	26	26		19	19			

Note. Effect size was also calculated using Hedges' unbiased g (g*), and were modified so that positive numbers indicate an effect in favor of the intervention group. (*p < .05 for the ANCOVA). AI = Appraisal Index; FFMQ = Mindfulness; ES = effect size.

QUALITATIVE

Interviews were conducted with a total of 8 group members over the course of a year and a half and were held two to three weeks after the conclusion of each final SPAM group meeting. As seen in Table 3, five interviewees were members of the second SPAM group (early fall 2015), one interviewee was a member of the third SPAM group (late fall 2015), and the remaining 2 interviewees were members of the fourth SPAM group (spring 2016). While quantitative data from the first SPAM group (fall 2014) was included in statistical analyses for the current study, interviews were not conducted with these members, as this group was a part of the pilot project, and more than a year had passed since its final session. However, members of the first SPAM group did engage in a post-intervention focus group used to explore group member experiences, the results of which are detailed in Reiser et al., (2016).

Table 3: Interviewee Characteristics

Interviewee*	Grade/Subj.	Years Teaching	SPAM Group	School
Maytal	6th Special Ed.	2	Group 2 Fall 2015 n = 8	Public Charter Middle School
Jaime	5th/ELA**	5		
Elizabeth	8th/Math & Sci.	8		
Chris	6th/ELA & S.S.***	1		
Erika	5th/ELA	5		
Sally	12th/Government	5	Group 3 Fall 2015 n = 3	Public High School
Susan	10th/Chemistry	3	Group 4 Spring 2016 n = 11	
Molly	10th/English	3		

Note. *All names provided are pseudonyms. **English Language Arts. ***Social Studies

The principal investigator analyzed the interviews for themes to examine both research questions. Four broad themes emerged within the interviews. Two themes were related to research question one, an exploration of the SPAM group's impact on teachers, and consisted of (a) utilization of content and skills outside of the group, and (b) positive personal and professional impact of participation. Likewise, two themes were related to research question two, an exploration of how group members described their experiences in the group, and included members describing their experiences as (c) a positive and valuable experience, and one in which (d) group work with colleagues was therapeutic.

Utilization of content and skills outside of group. All interviewees reported using skills, strategies, or content introduced in the SPAM group outside of the group sessions both professionally and personally. Seven noted such use inside the classroom, independently and/or with their students, while 2 interviewees reported using content during school but outside of the classroom, either independently or with a colleague. Six reported using SPAM group skills in their personal lives, both individually (n=6) and with family members (n=3). Interviewees endorsed utilization of a wide variety of both mindfulness strategies (e.g. mindful breathing, leaves on a stream) and psychoeducational content (e.g. nature of thoughts, emotions as waves, stress cycle). For example, Maytal said, "I had a heightened experience with a student, and I came in [my classroom] and I was going to have to see students. So I just started to do the interval nostril breathing and it just dropped my blood pressure so that I could feel better about the situation. That really helped because I wasn't physically feeling the way that I had been a minute before."

While qualitative data suggest that group members utilized SPAM group content and skills outside of group, it appears that they did so spontaneously, on an as-needed basis, as no one reported regularly completing the weekly homework. A few members

noted a difficulty remembering to do the homework, while some members cited a lack of time and competing priorities as barriers to completion. Nevertheless, several members reflected that they wished they had done more of the homework and suggested that greater emphasis be placed on homework in subsequent SPAM groups.

Positive personal and professional impact. All participants who were interviewed reported that their participation in the SPAM group had a positive professional and/or personal impact. Interviewees reported a vast range of positive benefits of participation, and several patterns emerged as subthemes across the dataset. Subthemes included perceived improvements in engagement with emotion; engagement with stress; responding vs. reacting; compassion for self, colleagues, and students; and strengthened relationships with colleagues.

Engagement with emotion. Nearly all interviewees (n=7) cited an increased ability to engage with emotion as a result of participating in the group, and often described a shift from avoiding their emotions to accepting their emotions. Specifically, many interviewees cited an increased ability to notice or acknowledge their emotions as they arose (n=5). Additionally, interviewees cited an increased ability to allow themselves to experience or feel that emotion as it occurred (n=6) instead of bottling up or avoiding those feelings. Susan illustrates this process saying, "I know I struggled with being aware of my emotions before I started in the group…I think that [before] I wouldn't really acknowledge [the emotion] because I didn't really know what I was feeling. I'm no longer keeping [the emotion] in; I'm not bottling it up because I'm feeling that emotion." Likewise, Molly said, "Before [the group], I didn't even acknowledge [emotion]. And if I did acknowledge it, I just felt I should ignore it and said to myself, 'You need to push forward.' …I used to think stopping to acknowledge emotion was hokey."

Along with an increase in acknowledging and experiencing emotions, several group members reported judging themselves less for having difficult emotions and being better able to let emotions go after experiencing them. Susan, who was quoted above, reported, "I think before [the group] I tended to go, 'Why am I feeling this way constantly?' and now it's more like, 'No judgment. Feel it. Let it go.'" She also reported that being in a group with colleagues contributed to these changes saying, "It also helped realizing everyone feels these emotions – that it's ok to feel this way – and hearing other teachers say, 'I feel anxious all the time, I feel like I'm racing constantly.' I felt better hearing that; realizing, 'Don't judge yourself. You aren't the only teacher to feel this way, let it go.'" Likewise, Molly reflected upon a long-held prior belief that emotions could and should be controlled. "I used to say you choose how you're feeling… And I don't do that anymore. At all." Referring to the fourth session which focused on emotions, she said, "The lesson that was the most meaningful to me …was this idea that our emotions are not our fault and we cannot control them… I actually went home and told [my husband]…And I was just like, 'Oh my god, I've never thought about it this way before. Like, [this] changed our lives."

Finally, a few interviewees reported that their increased ability to engage with emotions led to decreased exhaustion and feeling more refreshed and energized (n=3). For example, Erika said, "Now that I'm dealing with [emotion] in the moment – and it's a little embarrassing for a couple minutes – I get back on track and I feel a lot better at the end of the day. I don't feel like this exhaustion." The increased ability to ride waves of emotions instead of ignoring them altogether appears to have positively impacted these teachers both professionally and personally.

Engagement with stress. Most interviewees (n =7) also reported improvements in how they engage with stress. Specifically, interviewees noted an increased ability to

notice (n = 5) and cope (n = 6) with stress. Jaime said, "I think through mindfulness I also learned to spot and then stop the stress cycle. I notice when my wheels are turning and tell myself I can stop it. That I have options – like watching my thoughts on a leaf, watching the train go by, do the alternate nostril breathing." Likewise Sally remarked, "I think the group just taught me how to recognize when it's happening and then try to halt the cycle." Despite reports of such improvements, analyses of interviews did not provide evidence of reductions in vulnerability to stress; specifically, changes in perceptions of demands in relation to resources. Susan reflected, "I guess I think my stress and my work level is the same still, but I think that I feel it…maybe not that I feel it less but I process it a little bit better now. When I do start to feel overwhelmed and stressed I try to take a breath." Such reflections suggest that this intervention may have a greater impact on a teacher's ability to notice and cope with stress rather than altering a teacher's vulnerability to or ability to prevent stress.

Responding vs. reacting. Many interviewees (n = 6) mentioned an increase in their ability to pause when engaged in a stressful classroom situation and that this pause allowed them to provide a more thoughtful response rather than an immediate reaction. The ability to stop and acknowledge feelings of stress or strong emotion in the moment allowed them to respond more thoughtfully rather than react automatically. Jaime noted, "Mindfulness has allowed me to incorporate a state of calmness before I react…instead of having that immediate emotional reaction, I'm allowed to have a little bit of down time." Susan reflected that such improvements have had a positive impact on her interactions with students, "In the classroom when I'm feeling strong emotions – whether it's sadness or anger or anxiety or stress or whatever – now I'm able to say, 'What am I feeling right now? Feel it, let it go.' And that really helps me not take it out on the students… I think that's really helped my classes stay calmer cause I've been calmer in

this process." Such responses suggest that teachers' increased ability to notice and experience or "ride out" their strong feelings in the classroom as they happen gave them the space to choose a response rather than reacting impulsively.

Compassion for self, colleagues, and students. Interview data suggests that members experienced positive changes in how they viewed themselves, colleagues, and students. Interviewees reported that they felt more compassionate toward themselves professionally (n = 4), criticized colleagues less (n = 5), and increased compassion for students (n = 3) after participation in the group. Chris, a first year teacher, reflected upon his tendency to try and be a "perfect teacher." He said, "Up until we did that mindfulness thing, I've always been like, 'Whoa – am I late on this? Should I be doing what other teachers are doing? Am I a bad teacher?' and literally ever since we had that session, I've never had those thoughts again, as far as like stuff based on what other teachers are doing." Some interviewees also reported that after participation in the group, they are less critical of their colleagues as they observe them in their work. Elizabeth said, "So [now] when I see other teachers and think, 'She's just lazy,' it's like, 'Probably not. Probably there's more to it than that.'" Likewise, Erika said, "I think [the group] has definitely made me feel more compassionate toward my coworkers… I went into the group thinking mostly about myself, and I came out having a lot more empathy and compassion for the people who I bonded with." Finally, Jaime spoke to an increase in compassion for students, citing times in which she reminds herself to consider her students' context and unique stressors.

Strengthened relationships with colleagues. Finally, many interviewees (n = 7) reported strengthened relationships with colleague group members, citing an increased feeling of community at school as a result. Several interviewees said they experienced feelings of "trust", "solidarity", and "reduced isolation" during and after their time in the

group, and noted that they felt they could now reach out to other members when facing struggles and challenges at work.

SPAM as positive and valuable experience. All interviewees described their experience in the SPAM group as both positive (n = 8) and valuable (n = 8), and many expressed gratitude for the opportunity (n = 5). Words and phrases with a positive valence used to describe their experience participating were present throughout the interviews and included the following: enjoyed, liked, positive experience, and looked forward to it. Group members interviewed also described the SPAM group experience using words and phrases that communicated value. Such words included: useful, helpful, valuable, worth my time, beneficial, or met their expectations for what they hoped to get out of it. One group member said, "Participation in the group should have been required for the entire staff," while another added, "I was disappointed when I missed sessions – the material was so valuable." Finally, at the conclusion of several interviews, members expressed appreciation or gratitude for the opportunity to participate, for the impact it made, and for creating an opportunity to address the needs of teachers specifically.

Group work with colleagues was therapeutic. Analyses of interviews suggest that being in a group with colleagues was therapeutic. Several group therapeutic factors emerged from the data and were considered by interviewees as important to the felt experience of the SPAM group. Nearly all interviewees (n = 7) mentioned the positive experience of building and experiencing group cohesion. Interviewees noted that they enjoyed fostering and strengthening relationships with colleagues during the group and experienced a sense of belonging and acceptance. When asked to describe how it felt to be in the group Molly said, "Cohesiveness is the first word that comes to mind. I feel like we are all invested in being on the same team – those of us who were in the SPAM group…I feel like we take care of each other." Further, many interviewees (n = 6) cited

the importance of group culture, reporting that the group felt "safe" and/or "comfortable" because other members were perceived as "vulnerable" and/or "authentic" during group sessions. Members also mentioned the importance of gaining support and guidance (n = 6) and experiencing universality (n = 5); the recognition of shared feelings and experiences among group members that reduces isolation and validates an individual's experiences (Yalom & Lescz, 2005). These members reported that hearing that other teachers, especially veteran teachers and those perceived as "having it all together", were also stressed and "at the end of their ropes", normalized their own experiences and helped them to refrain from judging themselves for their feelings of stress.

While the overwhelming majority of interviewees described their experiences as beneficial and positive, a few highlighted some challenges. Two group members indicated that they felt the homework would have been helpful, but the lesser emphasis and accountability from facilitators made it a challenge for them to remember and prioritize engaging in it. Because attrition was a limiting factor in the pilot study, facilitators stressed that the homework was "recommended but optional," in an attempt to prevent SPAM group participation from being perceived as an additional demand that could serve as a barrier to group membership and attendance. In addition, while most interviewees highlighted the positive impact and experience of sharing with other group members, one interviewee felt that the facilitator allowed for too much group member sharing at the expense of practice with skills. She also mentioned that, at times, engaging in partner activities during sessions was challenging when her work-related stress was related to an event or interaction with a colleague who was also a group member.

Discussion

The quantitative results of this study show teachers who participated in the SPAM group reported greater increases in mindfulness than their colleagues in the comparison condition. Qualitative data suggest that group members used the skills and content of SPAM sessions outside of group, felt they benefitted from participation – particularly among colleagues – and described the group as a positive and valuable experience. Overall, the results of this study provide preliminary support for the use of a short-term stress prevention and mindfulness psychoeducation and support group with teachers in schools.

The statistically significant increase in mindfulness after mindfulness training is consistent with recent studies of mindfulness training with teachers (Benn et al., 2012; Crain et al., 2016; Flook et al., 2013; Roeser et al., 2013) and lends support for both the efficacy of brief MBIs and the efficacy of MBIs adapted for use with teachers. While qualitative data suggests that members did not regularly engage in structured weekly homework, nearly all interviewed group members reported using concepts and strategies introduced in the SPAM group in their professional and personal lives, so is possible that such practice outside of the SPAM group influenced the overall quantitative mindfulness scores. The use of concepts and strategies after such a group is also consistent with themes that emerged from recent qualitative research with teachers after mindfulness training (Sharp & Jennings, 2016).

Changes in mindfulness play an important role in the changes observed in MBIs (e.g., Brown et al., 2007; Carmody, Baer, Lykins, & Olendzki, 2009). The quantitative increase in mindfulness for group members is consistent with sub-themes that emerged from group member interviews such as increases in engagement with emotion and stress,

as well as an increased ability to respond rather than react in stressful situations. The shift from avoiding to acknowledging and then experiencing emotions may be related to an increased ability to observe and describe inner experiences, both central traits of mindfulness taught in the SPAM group and measured by the FFMQ-SF. Indeed, previous research suggests MBIs may increase these central traits, which may then mediate the influence of the training on stress and other well-being outcomes (Benn et al., 2012). Members also described an increased ability to take a breath or a short pause during challenging situations, which allowed them to choose a response rather than reacting impulsively. This is consistent with findings from a qualitative study by Sharp and Jennings (2016), which reported that teachers felt their participation in an MBI (Cultivating Awareness and Resilience in Education; Jennings et al., 2011) positively impacted their emotional reactions and led to the development of a less reactive approach to students. This increase in teacher mindfulness is important, as mindfulness has been shown to facilitate social interactions (Prazak et al., 2012) and is related to social wellbeing (Howell et al., 2008), which suggests that implementation of such a group could positively impact relationships with both colleagues and students.

Finally, participating in the SPAM group with colleagues appeared to be meaningful to teachers. Qualitative findings suggest group cohesion and universality were two therapeutic factors (Yalom & Lescz, 2005) that members experienced in the group. These factors could positively impact teachers and students, as feelings of connectedness with others at school have been linked to increased teaching engagement and decreased emotional exhaustion and psychological distress (Klassen, Perry, & Frenzel, 2012; Tuettemann & Punch, 1992). Most MBIs are not explicitly designed to leverage the group format, in that specific attention to group processing, member roles, and other aspects of group dynamics are not emphasized, but results suggest that the

support focus of such a group may lead to strengthened relationships with colleagues. Most interviewees reported that they strengthened relationships with their colleagues in the group and felt an increased sense of community at school as a result, which is consistent with results from the focus group conducted after the pilot SPAM group (Reiser et al., 2016). Social support at school is an important coping resource for educators (Klassen & Chiu, 2011), and research suggests that professional relationships with colleagues contribute to a teacher's sense of self-efficacy, which has been linked to teachers' decisions to stay at or leave their school (Allensworth, Ponisciak, and Maszzeo, 2009).

LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

This study utilized a quasi-experimental design; therefore, causal inferences cannot be securely drawn from the results. Confounding variables in this study may have included personal or professional factors influencing members' decision to join or not join the group. Additionally, the sample size was small, and included teachers from public schools in a single city in the southwest United States. Participants were predominantly White women and had a mean age of 31 and an average of 5.5 years' teaching experience; therefore the sample may not be representative of teachers in other types of schools, regions of the country, of other genders, races, ages, and years in the classroom. Future research may focus on running similar groups with a larger and more diverse sample of teachers across a range of geographic regions. Next, post-intervention measures were conducted 1-2 weeks following the completion of the SPAM group, so additional studies might conduct evaluation again at a later date. Finally, post-intervention interviews were voluntary, so it is possible that those whose experiences were positive self-selected for this opportunity. It should be noted that the principal

investigator who was also the facilitator conducted each of the eight interviews, so reactive effects may have occurred. Specifically, it is possible that participants may have failed to share some of their negative experiences with the group for fear of disappointing the interviewer who they had become familiar with over the course of many weeks. Likewise, investigator effects may have occurred, such as biases toward intervention effectiveness.

Given the statistically significant increase in mindfulness for group members, future research could explore changes in specific facets of mindfulness after such a group with teachers, which was beyond the scope of this study. Several recent studies utilizing the FFMQ investigate changes in distinct facets of mindfulness, finding variations in outcome variables (ex. negative affect, social inhibition, flourish) due to specific subscales on a measure of mindfulness (Prazak et al., 2012). The function of member support tends to be overlooked and underexplored in most stress management and MBIs, and results of the current study suggest that attention to group processes in such interventions warrants also further research.

While results were not statistically significant, vulnerability to stress and job satisfaction are variables worthy of further exploration as they relate to participation in such a group. For example, while differences were not statistically significant, CARD appraisal index scores at pretest suggest that group members were less vulnerable to stress than their colleagues who did not join or complete the group, and future research might explore how vulnerability to stress or perceived stress may influence a teacher's decision to voluntarily join such a group or intervention. Further, no statistically significant changes were noted in vulnerability to stress after participation in the SPAM group, though qualitative analyses indicated that members reported improvements in their ability to recognize and cope with stress. Subsequent research might utilize measures

designed to evaluate individuals' levels of stress and perceived ability to cope with stress after participating in the SPAM group.

While the change was not statistically significant, teachers who participated in the SPAM group showed a greater increase in job satisfaction than teachers in the comparison condition. We suggest that this is a promising finding, which warrants future research, as to date very little is known about the relationship between mindfulness and/or brief group interventions and teacher job satisfaction. Higher sample sizes, randomized control trials and meditational models could be used to explore the potential impact of such a group on these variables.

IMPLICATIONS FOR GROUP WORK WITH TEACHERS IN SCHOOLS

The SPAM group brought teachers together for an hour per week for 6-8 consecutive weeks. There was a total of 6-8 hours of time spent in session, along with an average of 30 minutes of recommended weekly homework. This was a sizeable and intentional reduction in duration from traditional MBIs with respect to the quantity of demands teachers face both during and outside of the school day. While it is possible that SPAM group member quantitative outcomes may have improved with more time in session or more homework, quantitative results of this study suggest that a short term, short duration stress prevention and mindfulness group held in schools functions to raise mindfulness in teachers.

Qualitative analyses suggest that group members overwhelmingly described their experience in the SPAM group as a positive, valuable experience, and one in which being in a group with colleagues was therapeutic. Specifically, group members mentioned strengthening of colleague relationships as an important benefit of the group. This supports the use of a support component in stress management and/or mindfulness groups

for educators, as capitalizing on group process may strengthen relationships among colleagues. Strengthened relationships with colleagues may lead to positive changes in the work environment as well, such as increased teacher collaboration, improvements in staff culture, etc., and research suggests that a supportive working environment for teachers may contribute to increased student achievement (Johnson, Kraft, & Papay, 2012). Results of this study suggest that such groups offer potential as a low-cost, time efficient strategy for increasing teacher mindfulness and strengthening relationships among colleagues, which could lead to positive outcomes for both teachers and their students.

Appendices

APPENDIX A. EXTENDED LITERATURE REVIEW

The most important school-level factor in a student's learning is his teacher (McCaffrey, Koretz, Lockwood, & Hamilton, 2004; Rivkin, Hanushek, & Kain, 2005). Teaching is a demanding profession, and while educator stress has been widely acknowledged (Bertoch, Nielsen, Curley, & Borg, 1989) and explored for decades (Bibou-Nakou, Stogiannidou, & Kiosseoglou, 1999; Brouwers & Tomic, 2000; Eskridge & Coker, 1985; Sutton, Mudrey-Camino, & Knight, 2009), recent educational accountability standards have only added to the demands placed upon them (Lambert, McCarthy, Crowe, McCarthy & Fisher, 2012).

Kyriacou and Sutcliffe (1977) defined teacher stress, as "a response by a teacher of negative affect …as a result of the demands made upon the teacher in his role as a teacher," which includes, "the degree to which the teacher perceives that he is unable to meet the demands made upon him" (p. 299). This definition is consistent with transactional models of stress (Lazarus & Folkman, 1984), which theorize that when an individual perceives that life demands exceed resources, stress is the likely result. As applied to teachers, transactional models of stress propose that teachers whose perceived demands outweigh their perceived resources are most vulnerable to stress (Chang, 2009; Steinhardt, Jaggars, Faulk, & Gloria, 2011).

Chronic stress is widely credited for the pattern of teachers entering, then leaving, the profession for reasons other than retirement (Ingersoll, 2001; Klassen & Chiu, 2011), and research by Ingersoll (2001) suggests that teacher attrition is less a result of a teacher shortage or teacher retirement and more a result of teacher dissatisfaction and the pursuit of other employment. Indeed, the Metlife Survey of the American Teacher found that teacher satisfaction fell to a 25-year low in 2012. Compared with other occupational

fields, turnover is particularly high for novice teachers (Gray & Brauen, 2013; Ingersoll, Merrill, & Stuckey, 2014). The Beginning Teacher Longitudinal Study (BTLS), a nationally representative longitudinal survey, found that 18% of teachers leave after the first five years (Gray & Taie, 2015), and teaching demands play an important role. Using data from the BTLS, researchers found that novice teachers who perceived that their teaching demands exceeded their teaching resources were approximately twice as likely to leave their current school as novice colleagues without such an imbalance (McCarthy, Fitchett, Lambert, Lineback, & Boyle, under review), which may have harmful consequences for schools, students, and the communities they serve (Hong, 2012; Ronfeldt, Loeb, & Wyckoff, 2013).

The profession cannot expect to remain efficacious if composed of predominantly new entrants unlikely to stay in the classroom beyond a few years. With considerable evidence that vulnerability to stress is related to lower job satisfaction and higher teacher turnover, it is critical to explore interventions designed to address occupational stress and promote teacher wellbeing, which could profoundly affect teacher satisfaction and retention, especially in our highest needs schools.

Teacher Stress

Teaching is an indispensable profession: society depends on teachers to facilitate the learning and growth of younger generations. However, while many who enter the field consider teaching a calling, a number of factors make teaching a stressful profession. Historically, teaching in the United States was established as a career suitable for women whose primary responsibility was to raise children (Goldstein, 2014). While the pay and prestige of teaching still reflects this "secondary" occupational status, today's accountability standards have added considerably to teachers' demand levels (Lambert et al., 2012). Workload, time demands, disruptive student behavior, and organizational

factors have all been cited as sources of stress for teachers (Blase, 1986; Boyle, Borg, Falzon, & Baglioni, 1995; Feng, 2010).

Theoretical Origins: Transactional Models of Stress

Kyriacou and Sutcliffe (1977) define teacher stress as a state of negative affect, typically accompanied by potentially harmful physiological changes, resulting from aspects of a teacher's job. Teachers may experience negative, unpleasant emotions, such as tension, anger, or depression; mental health concerns frequently reported among educators (Kyriacou, 2001), as a result of some aspect of their work. Kyriacou and Sutcliffe (1977) further suggest that teacher stress is mediated by the perception that job demands are a threat and by coping efforts used to reduce such threats.

This definition fits with transactional theories of the stress process, which emphasize the perceptual nature of stress (Lazarus & Folkman, 1984). Such models predict that individuals experience stress when they perceive themselves as unable to cope with demands. Specifically, these models assert that stress can result when an individual perceives life demands as exceeding their resources for coping. Transactional models suggest that a teacher's stress can be understood as a personal appraisal of his job-related demands vis-à-vis his job-related resources.

Research indicates that teachers are most vulnerable to stress when they perceive their classroom demands as exceeding their available resources (Chang & Davis, 2009; Steinhardt, et al., 2011), and teacher appraisals of their work environment have been linked to the experience of stress (Kokkinos, Panyiotou, & Davazoglou, 2005; Moore, 2006). Studies suggest that the transactional model of stress is effective in examining the relationship between teachers' risk for stress and various outcomes such as job satisfaction, burnout, professional autonomy, and intention to remain in the field (McCarthy, Lambert, Lineback, Fitchett, & Baddouh, 2015).

Lambert, McCarthy, O'Donnell and Wang (2009) developed the *Classroom Appraisal of Resources & Demands* (CARD) to measure teacher perceptions of their classroom demands and resources and to assess teachers' risk of experiencing stress at work. Teachers are classified into three groups based on their responses to the CARD: (1) those perceiving classroom resources as greater than demands (labeled Resourced group), (2) those perceiving classroom resources as relatively equal to demands (labeled Balanced group), and (3) those perceiving classroom demands as exceeding their resources (labeled Demand group). According to transactional models of stress, the Demand group is theorized to be most vulnerable to stress.

While a number of specific demands are consistently linked to teacher stress, including classroom management and student discipline (Feng, 2010), larger class sizes, and poor administrative climate (Loeb, Darling-Hammond, & Luczak, 2005), in transactional models of stress, perception is paramount. These external realities are undoubtedly important to teachers' occupational well-being, but research with the CARD indicates that most of the variability in teacher stress and burnout is at the individual teacher level and not at the school campus level, even within the same school (McCarthy, Lambert, O'Donnell, & Melendres, 2009; O'Donnell, Lambert, & McCarthy, 2008; Ullrich, Lambert, & McCarthy, 2012). Given previous research showing the CARD as a promising way to operationalize transactional models and understand teacher stress, an important question arising from studies with teachers concerns the degree to which teacher appraisals differ as a result of an intervention.

Teacher Stress and Its Consequences

A teacher's perception of an imbalance between demands and resources contributes to several negative outcomes: vulnerability to stress, job dissatisfaction, emotional exhaustion, and burnout, and less likelihood to remain in teaching (Klassen &

Chiu, 2011; Lambert, McCarthy, Fitchett, Linebeck, & Reiser, 2015; López, et al., 2010; McCarthy et al., 2009).Specifically, studies using the CARD suggest that teachers who perceive themselves as having higher classroom demands compared to resources report more burnout symptoms, more students with behavior problems, learning disabilities, and poor attendance (Kusherman, O'Donnell, & McCarthy, 2006; Lambert et al., 2007 & 2012; McCarthy et al., 2009). Likewise, teachers reporting an intention to leave their current job for professional rather than personal reasons also report higher demands in the classroom, fewer resources provided by schools, and higher levels of occupational stress (Jazaar, Lambert, and O'Donnell, 2007; McCarthy, Lambert, Crowe, & McCarthy, 2010).

Teacher burnout. Chronic stress can also lead to teacher burnout, a loss of idealism and enthusiasm for work (Freudenberger, 1974), which consists of emotional exhaustion, lessening of feelings of personal accomplishment, and distancing oneself emotionally from others (Maslach, Schaufeli, & Leiter, 2001). Teachers' perceptions of stress and their ability to cope with demands are important factors in burnout (McCormick & Barnett, 2011). For example, symptoms of depersonalization and emotional exhaustion were positively related to the classroom demand score given by the CARD (McCarthy et al., 2009). Again, studies suggest that variability in burnout is a function of teacher perception, rather than the building in which they work (O'Donnell et al., 2008). Consequently, research suggests that teachers with positive perceptions of their work environment are more likely to be satisfied with their work, remain in teaching, and also less likely to succumb to burnout (Johnson, Reinhorn, Charner-Laird, Kraft, Ng, & Papay, 2014; Ladd, 2011; Skaalvik & Skaalvik, 2011).

Job Satisfaction. Research also suggests that stress plays a role in teacher job satisfaction. A teacher's perceptions of the ratio of demands to resources have been associated repeatedly with job satisfaction. CARD group classifications have been

associated with vocational concerns in several studies, and being in the Demand group is consistently associated with lower levels of job satisfaction. Likewise, resourced teachers had higher levels of job satisfaction than teachers in the Demand or Balanced groups (McCarthy et al., 2015).

Previous research also suggests that teacher job satisfaction may be due to other factors related to a teachers' individual felt experience at work. For example, a study by Winter and colleagues (2006) indicated that teacher autonomy along with meaningfulness, responsibility, and knowledge of results from their work, accounted for a statistically significant amount of the variance in job satisfaction. Similarly, Johnson and colleagues (2012) found that teachers with a positive sense of control tended to have a high level of satisfaction and were more likely to stay in their current position.

Turnover. While studies have shown that many teachers remain in the classroom despite emotional stressors that might lower their satisfaction and inhibit their effectiveness in the classroom (Farber, 1991; Kokkinos et al., 2005; Skaalvik & Skaalvik, 2011), teacher attrition continues to be a concern. Ingersoll (2012) noted that in 1987 the most common teacher in the workforce had 15 years of experience, while in 2008 the most common teacher was a first year beginner. Despite the increasing attention to teacher recruitment and the popularity of alternative certification programs, Ingersoll's research suggests that the declining age of the most common teacher is primarily due to teacher dissatisfaction and the pursuit of other employment. Compared with other occupational fields, turnover is particularly high for novice teachers (Gray & Brauen, 2013; Ingersoll et al., 2014) and research suggests that chronic stress plays a significant role. The Beginning Teacher Longitudinal Study (BTLS), a nationally representative longitudinal survey, found that 18% of teachers leave after the first five years (Gray & Taie, 2015). Using data from the BTLS, researchers found that novice teachers who were

in the Demand group were approximately twice as likely to leave their current school as novice colleagues without such an imbalance (McCarthy et al., under review). This finding connects to previous research that found that being in the Demand group was associated with a greater intention to leave their jobs (McCarthy et al., 2015).

Coping Resources

Given the high level of demands inherent to teaching, it is worth considering the factors that keep teachers happy, healthy, and in the classroom. Coping resources refer to various assets in an individual's repertoire for dealing with life demands (Matheny, Curlette, Aycock, & Junker, 1993), and access to coping resources is hypothesized to be an important element in the stress process, in general (Hobfoll, Schwarzer, & Chon, 1998) and with teachers (Friedman, 2006). Demand group classification has been repeatedly associated with lower personal coping resources, (McCarthy et al., 2015). For example, McCarthy and colleagues (2010) found that high school teachers with higher levels of resources for stress prevention reported less classroom stress and higher job satisfaction.

Research suggests that social relationships within the school such as relationships with colleagues and administrators might be considered important types of coping resources for educators (Klassen & Chiu, 2011). Connectedness with students and colleagues in particular, has been linked with increased teaching engagement and decreased emotional exhaustion and psychological distress (Klassen, Perry, & Frenzel, 2012; Tuettemann & Punch, 1992).

In a time in which teacher stress, burnout, and turnover is high, interventions designed to address and prevent stress could improve job satisfaction and ultimately the decision to leave or remain in the teaching profession. Interventions aimed at both stress

management and the promotion of school-based relationships could positively impact a teacher's vulnerability to stress and ability to cope.

Stress and Mindfulness Interventions

Managing stress is a common focus of group interventions, particularly for professional populations. Approaches to stress management interventions may operate at different levels by targeting either the intensity of stress at work, perceptions or appraisals of stressful situations, and/or ways of coping with stress (Richardson & Rothstein, 2008). Several meta-analyses of interventions for stress in occupational settings indicate group stress management training (including cognitive-behavioral approaches and relaxation techniques) is a popular approach and has been shown to be effective in reducing employee stress in schools, hospitals, factories, and other settings (Richardson & Rothstein, 2008; Van der Klink, Blonk, Schene, & Van Dijk, 2001).

In educational settings, researchers have argued the importance of intervening directly with teachers, by offering stress management programs, wellness trainings, and/or physiological training (Kipps-Vaughan, 2013). Recent studies on stress management programs for teachers have found success in a range of techniques including relaxation therapy, meditation, stress inoculation training, and mindfulness (Cecil & Forman, 1990; Crain, Schonert-Reichl, & Roeser, 2016; Flook, Goldberg, Pinger, Bonus, & Davidson, 2013; Kaspereen, 2012; Sharp & Jennings, 2016; Winzelberg & Luskin, 1999).

Mindfulness-Based Interventions

Mindfulness is one such intervention for stress, and is theorized to both alter perceptions of stress and also act as a resource for coping with stress (Kabat-Zinn, 1990). Mindfulness is a practice rooted in Buddhist philosophy that involves paying attention to the present moment intentionally and non-judgmentally (Kabat-Zinn, 1994). Mindfulness

may also be considered a form of cognitive training that enables a person to attend to facets of an experience in a nonjudgmental, nonreactive way, which in turn helps cultivate clear thinking, equanimity, compassion, and open-heartedness (Ludwig & Kabat-Zinn, 2008). Current research suggests that individuals high in mindfulness display higher social well-being (Howell, Digdon, Buro, & Sheptycki, 2008; Prazak, Critelli, Martin, Miranda, Purdum, & Powers, 2012) and psychological and cardiovascular health (Prazak et al., 2012), as well as lower anxiety and negative emotions (Baer, Smith, & Allen, 2004; Miller, Fletcher, & Kabat-Zinn, 1995; Prazak et al., 2012). A primary goal of mindfulness is to maintain open awareness in one's experience in a way that generates a greater sense of emotional balance and well being. Through mindfulness practice, unhelpful habitual thoughts and behaviors can be noticed without resistance, allowing for new and creative ways of responding (Kabat-Zinn, 1994). Mindfulness has been incorporated into treatments used in counseling and psychotherapy, both informally and through approaches like Acceptance & Commitment Therapy and Dialectical Behavioral Therapy (Hayes, Strosahl, & Wilson, 1999; Linehan, 1993).

Research suggests that mindfulness-based interventions (MBIs) are associated with reductions in stress (Brown, Ryan, & Creswell, 2007; Burke, 2010; Fortney, Luchterhand, Zakletskaia, Zgierska, & Rakel, 2013). For example, MBSR (Kabat-Zinn, 1990) is a manualized group treatment that has produced a wide body of efficacy research. Used in a variety of settings, MBSR is a widely known form of mindfulness training that has been shown to reduce stress, depression, and anxiety (Grossman, Niemann, Schmidt, & Walach, 2004; Hofmann, Sawyer, Witt, & Oh, 2010) and may also help individuals regulate emotion (Siegel, 2007), and increase perceptions of control (Astin, 1997).

While the efficacy of mindfulness interventions has been primarily examined with individuals facing serious physical and/or mental health conditions, MBIs in occupational contexts have received increased attention in the past ten years (Baer et al., 2006; Irving, Park-Saltzman, Fitzpatrick, Dobkin, Chen, & Hutchinson, 2012; Fortney et al., 2013; Kabat-Zinn & Hanh, 2009; Praissman, 2008; Shapiro, Astin, Bishop, & Cordova, 2005) and have been shown to increase job satisfaction (Hülsheger, Alberts, Feinholdt, & Lang, 2013) and reduce burnout (Goodman & Schorling, 2012) in a professional setting. However, much of the research in occupational settings has focused on healthcare professionals (Irving et al., 2012; Shapiro et al., 2005). In addition, most of these interventions have followed standard curricula established for working with clinical populations, and are not specifically tailored to meet the needs of a specific work setting. A recent pilot study by Fortney and colleagues (2013) studied an abbreviated mindfulness-training course adapted for primary care clinicians and found that increased mindfulness was associated with reductions in job burnout, depression, anxiety, and stress. Such results suggest that a mindfulness trainings adapted for specific occupational contexts may be a time-efficient and effective tool to help support health and well-being.

Mindfulness-based interventions with teachers. Mindfulness has made its way into schools in recent years, and studies of MBIs consistently yield promising results with both students (Black, Milam, & Sussman, 2009; Edwards, Adams, Waldo, Hadfield, & Biegel, 2014; Franco, Mañas, Cangas, & Gallego, 2010) and teachers (Benn, Akiva, Arel, & Roeser, 2012; Flook et al., 2013; Gold, Smith, Hopper, Herne, Tansey, & Hulland, 2010; Roeser, Schonert-Reichl, Jha, Cullen, Wallace, Wilensky, Oberle, Thompson, Taylor, & Harrison, 2013). In schools, MBIs have been primarily focused upon students or classrooms as a whole, with the intention of reducing stress and improving academic performance and self-concept in students (Edwards et al., 2014; Franco, et al., 2010).

Results of mindfulness-based practices in youth are promising and suggest that mindfulness-based interventions can also help to reduce perceived stress and depression for students (Edwards et al., 2014). There is less research on interventions designed specifically for teachers; however, several studies suggest MBIs could be a cost-effective method to combat teacher stress and burnout (Flook, et al., 2013; Gold et al., 2010; Roeser et al., 2013).

While empirical studies of mindfulness based interventions with teachers are few, results are promising. Randomized control studies have found that after receiving mindfulness training, teachers reported greater mindfulness, self-compassion, focused attention, working memory capacity, and effective teaching behavior, along with lower levels of occupational stress, anxiety, and burnout (Benn et al., 2012; Flook et al., 2013; Roeser et al., 2013). Results of a recent empirical study by Flook and colleagues (2013) suggest that a modified mindfulness intervention adapted for teachers may increase aspects of elementary school teachers' mindfulness, self-compassion, and effective teaching behavior, while decreasing negative psychological symptoms and burnout. It is worth noting that these effects were determined by both self-report measures (mindfulness, self-compassion) and objective measures (cortisol levels, behavioral tasks, and observer-rated teaching behavior). Furthermore, the degree of change in mindfulness for teachers receiving the MBI was correlated with improvements in burnout and attention, and reductions psychological symptoms, depersonalization, and emotional exhaustion. These findings lend support to the idea often found in mindfulness literature that changes in mindfulness play a key role in the changes observed in mindfulness-based interventions (e.g., Brown et al., 2007; Carmody, Baer, Lykins, & Olendzki, 2009).

Qualitative studies have also examined teachers' responses to MBIs and elucidate positive perceptions of the impact of participation in mindfulness training (Reiser,

Murphy, & McCarthy, 2016; Gold et al., 2010; Napoli, 2004; Sharp & Jennings, 2016). Several of these studies have used MBSR protocol and have yielded positive outcomes; teachers reported improved ability to manage conflict and anxiety and increased productivity in the classroom (Napoli, 2004); reduced depression, anxiety, and stress (Gold et al., 2010); and positive shifts in their emotional reactivity and approach to students by using mindfulness skills (Sharp & Jennings, 2016). In the pilot for the current study, over the course of the SPAM group teachers reported that mindfulness as a stress reduction strategy "fit" for them, and they consistently felt "ready and motivated" to apply skills learned in the group. These teachers also reported that the group positively impacted their sense of community with colleagues, interactions with students, and ability to manage stress (Reiser, et al., 2016).

Little is known about the relationship between mindfulness and teacher job satisfaction; indeed, the study conducted by Flook et al. (2013) examined job satisfaction as measured by the Maslach Burnout Inventory (Maslach, Jackson, & Leiter, 1996) which reports on professional burnout as composed of emotional exhaustion, depersonalization, and lack of personal accomplishment. While professional burnout was reduced after participation in a mindfulness training course, investigators did not explore job satisfaction using a measure that captured job satisfaction along a range of dimensions external to workers, such as working conditions, organizational climate, salary, etc. which may be of particular interest to school districts, administrators, and policy-makers.

Student impact. Less is known about the effects of teacher mindfulness training on student outcomes, though researchers are beginning to explore its potential impact on teachers' practice and results are inconclusive. Jennings, Frank, Snowberg, Coccia, and Greenberg (2013) examined improvements in social-emotional climate, classroom

management, and quality of instruction at three months following an eight-session emotional learning and mindfulness intervention course with elementary school teachers. They found no statistically significant differences between intervention and control groups, but the authors noted that range restriction and small sample size may have impacted their ability to find an effect. In addition to previously mentioned positive outcomes specific to teachers, the study by Flook and colleagues (2013) also saw improvements in observer-rated classroom organization. Finally, while evaluation of student impact is beyond the scope of the current study, during the pilot study, administrators and teachers alike inquired about and reflected upon the intervention's potential impact on students. As captured in field notes during the intervention, several participants in the SPAM group mentioned ways in which group activities (specifically, work on identifying universal human needs within self and others) positively impacted interactions with students (Reiser et al., 2016).

Efficacy and feasibility. Researchers and practitioners have used different approaches to mindfulness training, varying in terms of the breadth and types of practices taught (content of lessons), length of sessions, and overall duration of training. Given the unfolding state of research on mindfulness with teachers, the efficacy and feasibility of a brief MBI conducted as a professional development program to reduce teacher stress is relatively unknown. Specifically, less is known about the recommended format, length, or duration of such trainings, not to mention its feasibility in consideration of teachers' busy workweeks and high accountability for student-level performance outcomes.

While MBSR has been shown to be an effective method of reducing stress and increasing wellness for teachers, the typical MBSR program is composed of eight weekly 2.5 hour classes and one day-long class totaling nearly 30 hours of direct instruction (Kabat-Zinn, 2013). Further, studies of mindfulness training with teachers have utilized

MBIs with even longer total time spent in sessions (e.g. Benn et al., 2012; Jennings, Snowberg, Coccia & Greenberg, 2011), which may not be practical in many educational settings. All-day sessions allow for highly concentrated, in depth exposure to and practice with mindfulness concepts and strategies, and evening classes would prevent student interruptions, but in practice, this format may require teachers to have coverage for their classes and time in the evening free from grading, parent phone calls, or administrative tasks. Indeed, time spent outside of the typical teacher workday may not be feasible or permissible by many pressured public school teachers and administrators.

In spite of this challenge, Klatt, Buckworth, and Malarkey (2008) found statistically significant reductions in stress and increases in mindfulness for a group of working adults using a six-hour MBI over the course of six weeks, suggesting shorter programs may produce comparable results to longer, more standardized MBIs. Further, Carmody and Baer (2009) examined 23 MBI studies and found no statistically significant correlation between effect size of outcomes and number of intervention hours, providing further evidence in support of more brief interventions. Shorter programs may be more practical for teachers, and researchers agree that more information is needed regarding the relationship between program length and effectiveness (Roeser, Skinner, Beers, & Jennings, 2012). These researchers suggest additional empirical studies on mindfulness training with teachers, including studies targeting outcomes related to teacher well being, such as job satisfaction, while other researchers suggest studies with qualitative components to illuminate issues regarding sustainability at the organizational level (Crain et al., 2016).

Group Interventions

While MBIs are commonly offered in a group format (Burke, 2010, Kabat-Zinn, 1994; Newsome, Waldo, & Gruszka, 2012), these and other stress management

interventions tend to focus on psychoeducation and the acquisition of skills during sessions, while the role of the group itself is not emphasized. However, research suggests that the group format itself may play a role in such interventions. Group work provides benefits for members; generating therapeutic factors such as the formation of a safe communal environment and helping members normalize their experience and realize they are not alone. Research on group therapeutic factors (e.g. cohesiveness, universality, altruism) suggests that they are key to both fostering a therapeutic environment and facilitating therapeutic change in a group-counseling context (Yalom & Lescz, 2005). For example, a recent study with participants in Alcoholics Anonymous (AA) group found that one group therapeutic factor—perceived group cohesion—predicted increased AA attendance, the practice of prescribed AA activities, and self-reported AA usefulness (Rice & Tonigan, 2012). This research suggests that a sense of group cohesion may predict subsequent healthy behaviors.

Given the concurrence of mindfulness approaches and group structure, it is possible that some of the positive outcomes associated with MBIs are due to the group format. Consequently, it seems pertinent to explore this variable in facilitating groups for teachers as therapeutic factors may facilitate the development of mindfulness skills and stress management. For example, in a qualitative study that utilized MBSR with health care professionals in a group setting, Irving and colleagues (2012) found that participants highlighted the importance of the group setting, reporting that feelings of support and mutuality enhanced their experience, as fellow group members normalized the experience of occupational stress and provided support as they learned mindfulness techniques. Likewise, evaluation of the pilot SPAM group for the current study suggested members benefitted from sharing mutual frustrations, processing successes and challenges in practicing mindfulness techniques, and receiving encouragement and support from each

other in and outside of the sessions. Teachers in the pilot SPAM group also reported strengthening relationships with colleague group members and felt a greater sense of community at work (Reiser, et al., 2016). Indeed, other researchers of MBIs utilizing group formats have suggested that future research examine the impact of group dynamics on mindfulness training, including an examination of participants' experience of therapeutic factors in the process of mindfulness training (Edwards et al., 2014).

Stress management interventions may be particularly beneficial if offered to teachers in a group format in their places of work where they can receive the training among their colleagues. Considering that most teachers plan, teach, and reflect upon their practice alone – a recent study by Scholastic and the Gates Foundation (2012) found that teachers spend only about three percent of their teaching day collaborating with colleagues – group work among colleagues might serve as a space to foster social support among teachers. Social support has long been identified as a resource that enables individuals to cope with stress (House, 1981), and according to the moderating hypothesis, individuals who have supportive social relationships are able to rely on others to aid them in dealing with stressful situations. Indeed, research suggests that social relationships within the school, such as relationships with colleagues and administrators, are important types of coping resources for educators (Klassen & Chiu, 2011).

While the formation of general, open, teacher support groups in schools would be a cost-efficient method of bringing teachers together in an effort to increase their social support, research by Mallinckrodt (1989) found that participants in groups with a specific theme perceived greater availability of guidance and support and perceptions of closer attachment bonds to other group members when compared to members of general process groups. These findings lend support for additional exploration of a structured group with for teachers and their colleagues. Generally, there remains a lack of research illuminating

the unique impact of participating in a structured psychoeducation and support group among colleagues specifically, as well as how the support function of the group may impact teachers. Organized, in-school, structured teacher psychoeducation and support groups could provide a low cost and effective strategy to address stress and promote the wellbeing of this unique and indispensable workforce.

APPENDIX B. ADDITIONAL BACKGROUND ON METHODS

Note: While the manuscript explores the results of two research questions, three overall research questions were explored in this study and are as follows: (1a) How does an in-school SPAM group impact teachers' vulnerability to stress, job satisfaction, and mindfulness? (1b) How does an in-school SPAM group impact teachers broadly? (2) What is the relationship between teacher vulnerability to stress, mindfulness, and job satisfaction? (3) How do teachers in the SPAM group describe their experiences?

Positionality Statement

Researcher bias and positionality are important in qualitative research (Hill, Thompson, & Williams, 1997), particularly in the current study in which the principal investigator led each component of the project: study design, SPAM group development, recruitment, implementation, facilitation, data collection, and interpretation. Several aspects of the principal investigator's identity and experience are worth noting as they held the potential for influencing the research process and/or outcomes.

The principal investigator was a White female in her early thirties who had experience as a public school teacher, similar to the majority of the study's participants. The investigator also had 5-6 years of experience in novice teacher support and development in K-12 district and charter schools. Because of both experiences, the investigator has strong views on educational practice and policy, which may have

influenced the lens through which she created and adapted the SPAM curriculum, interacted with group members, interpreted findings, etc. It should also be noted that the investigator had far more experience in teaching and education than in the study and practice of mindfulness. In addition, the investigator recruited participants from schools with leaders who were acquaintances of hers. For example, the assistant principal of the school where the second SPAM group was held is the wife of a close friend of the investigator. These connections undoubtedly influenced the types of schools and teachers who participated in the study. Finally, the principal investigator had experience leading counseling groups in various settings, including co-facilitating experiential growth groups in a group counseling graduate course and using mindfulness with groups in clinical settings. This group experience likely influenced investigator core values (e.g. openness with others) and also influenced the position of the researcher as "leader" as the groups were facilitated. Researcher effects such as facilitation style and bias toward program efficacy may have potentially impacted the process and outcome of this study.

Mixed Methods Design

Overall, the use of mixed methods in this study was chosen to produce a more complete understanding of the implementation of a stress prevention and mindfulness intervention with teachers at their place of work. This thorough approach may be useful in informing both theory and practice for applied use in the school setting. This study was conducted using a mixed methods design, as mixed methods may provide stronger evidence for results through convergence and corroboration of findings (Greene, Caracelli, & Graham, 1989). Specifically, a concurrent triangulation design was utilized, which involves the concurrent collection of quantitative and qualitative data, (preferably) equal priority given to both datasets, and the integration of results during interpretation or analysis phases (Creswell, Plano Clark, Gutmann, & Hanson, 2003). For the current

study, priority was given to both quantitative and qualitative results, data was analyzed separately, and integration occurred at the interpretation phase.

Quantitative and qualitative approaches were used in tandem to study the SPAM group, as results from each approach serve to complement, expand upon, or further explain results that may have been missed using either method in isolation (Mills, Durepos, & Wiebe, 2010). Additionally, the small sample size resulting from the challenge of recruitment and retention of participants for a lengthy study limits the power to detect treatment effects using statistical analyses alone. Small sample size was a risk determined by the execution of the pilot for this study (Reiser et al., 2016). Mixed methods designs also allow for the strengths of both approaches, may compensate for weaknesses of each method, and may add insights that the use of a single method could not accomplish (Greene, et al., 1989).

In the current study, using quantitative and qualitative data in a mixed methods design provided a richer understanding of the experience of the SPAM group, providing stronger evidence for results through triangulation. For example, two interview questions were designed to explore perceptions of the impact of being in the group, which were used to triangulate (confirm, explain, augment, or challenge) findings from the statistical analyses of changes in dependent variables. Mixed methods also provide an opportunity to explore a broader range of research questions (Greene et al., 1989). For example, interviews allowed for the exploration of the felt experience of being in the group (Research Question 3); a question that could not be addressed through the quantitative measures employed in this study.

Concurrent Triangulation

A concurrent triangulation mixed methods design was chosen for its ability to confirm, compare, cross validate, and/or corroborate results (Creswell at al., 2003;

Greene et al., 1989) such that valid and well-substantiated conclusions might be made about the impact and experience of the SPAM group (Hanson, Creswell, Clark, Petska, & Creswell, 2005). In concurrent triangulation designs, quantitative and qualitative data are collected and analyzed concurrently, equal priority is typically given to both forms of data, and integration tends to occur at the data interpretation stage by merging the two sets of results into one overall interpretation. Interpretation typically involves comparing and contrasting findings from both quantitative and qualitative methods and discussing the extent to which the data triangulate or converge (Creswell et al., 2003).

In many concurrent triangulation designs, data is collected simultaneously at a single point in time. For example, a researcher might choose to add an open ended question at the end of a quantitative survey. While SPAM group interviews were conducted after the conclusion of each 7-8 week group, it is important to note that this is still concurrent and not sequential data collection. First, the four SPAM groups were held consecutively over the course of 1.5 years so data collection alternated back and forth between quantitative measures and qualitative interviews over the course of that time. Next, while the sequence of data collection was critical in this study, in sequential designs, the results of one method tend to inform the method that follows (Creswell et al., 2003). In the current study, quantitative data was not examined or analyzed until all four groups were run, and all quantitative data and interviews were complete. As such, quantitative data did not inform qualitative methods or vice versa.

As Creswell et al. note, (2003) researchers can make decisions about the equal or unequal emphasis of quantitative and qualitative research within a study based on practical constraints of data collection. In the current study, was not practical to run more than one eight week group at a time given researcher time constraints. As previously mentioned, SPAM groups and data collection were conducted over the course of a year

and a half, and quantitative data and qualitative data were collected concurrently. Specifically, participants were given quantitative measures before and after the SPAM group and interviews were conducted within two weeks of the conclusion of the final SPAM session. This procedure was repeated with each successive SPAM group that was run. Quantitative data was analyzed after all four SPAM groups were complete, in the Spring of 2016. Likewise, qualitative data was analyzed separately after all four SPAM groups and their respective interviews were complete.

Furthermore, in addition to the interpretation stage on inquiry, integration occurred within the research questions themselves, as each methodology served to answer two of the three research questions in the study. Both methodologies addressed the first research question regarding the impact of the SPAM group, while the quantitative and qualitative methodologies were each used to address the second and third research questions, respectively. Given the concurrent collection of data due to practical constraints of running multiple SPAM groups and integration occurring within the study's research questions, equal priority was given to quantitative and qualitative methodologies. Following guidelines detailed by Creswell et al. (2003), results from the qualitative data collection were compared directly to the results from the quantitative data collection; specifically, statistical findings were compared to qualitative themes, and this integration and interpretation was described in the discussion of the manuscript.

Quantitative Approach

A quasi-experimental cohort design was employed in the quantitative component of this study to investigate the first research question, in which the researchers were interested in exploring change over time between treatment and comparison groups regarding teachers' vulnerability to stress, job satisfaction, and mindfulness. It was also used to explore the second research question regarding the relationships among these

variables. Cohort designs are a type of nonequivalent groups designs that utilize adjacent cohort groups that share similar environments. A quasi-experimental cohort design was chosen in the current study because random assignment to treatment groups was not feasible, and quasi-experimental cohort designs allow researchers to make causal inferences as comparability can often be assumed between cohorts from the same environment that do or do not receive a treatment (Shadish et al., 2002). The adjacent cohort groups in this study were teachers in three public schools in the Southwest; some were members of the intervention group (teachers two attended over half of SPAM sessions) and some were members of the comparison group (colleagues at these same schools who either did not attend the group sessions or who attended fewer than half of the sessions). To further explore equivalence, independent samples t-tests were used to explore group differences at pretest (both demographically and in terms of the variables measured).

Quantitative data were analyzed using IBM Statistical Package for the Social Sciences 19.0 (SPSS: Chicago, IL). For the statistical analyses of pre and posttests, analysis of covariance (ANCOVA) was used with pretest values of the dependent variables included as covariates. ANCOVA was selected in consideration of the moderately small sample size, as it allows for more statistical power than a repeated measures approach. In consideration of the small sample size in this study, researchers used between-group comparison effect sizes as an indicator of the strength of intervention effects. Both Hedges unbiased *g* (*g**) and partial Eta squared (η^2) were used to measure effect size. Hedges unbiased *g** is a variation of Cohen's *d* that corrects for biases due to small sample sizes (Hedges, 1981), and was selected for its ability to report the absolute magnitude of the advantage for the intervention group in standard deviation units. Partial

eta squared was also reported for its ability to estimate the amount of variance in outcome variables explained by participation in the SPAM group.

Qualitative Approach

Case study. An instrumental case study approach was selected to provide insight into the impact and experience of such a group, which may inform theory and practice regarding the utility of brief psychoeducation and support groups focused on stress and mindfulness with teachers. Instrumental case studies explore a particular case or cases (e.g., person, specific group, role, organization, etc.) to provide insight into a particular issue, propose changes or clarify current understandings, or build theory (Mills, Durepos, & Weibe, 2010). A case study approach was also selected with regard to the limited sample and context of the study, and so that the research questions could be studied in greater depth. In the current study, teachers' experience in the SPAM group (the case) provides insight into the efficacy, feasibility, and felt experience of brief stress management and/or mindfulness interventions more broadly. Using a case study approach, the researcher was both the group facilitator and the interviewer, and as such, was very familiar with the group member participants. Given the SPAM group's emphasis on group processing, spending 6-8 weeks in sessions with members meant that the researcher got to know facets of members' lives both professionally and personally. While identities of group members was unknown to the researcher in the quantitative data, this high familiarity with members assisted in providing context and insight in the qualitative analysis.

Case study research involves rich empirical data gathered through varied data collection techniques. Multiple data collection methods were utilized over the course of this study and included group member interviews, interview memos, weekly post-session exit surveys, observer field notes (early Fall 2015 group), artifacts from SPAM group

exercises, and classroom observation of two group members. Due to time constraints, only data from interviews and interview memos were systematically included in the qualitative analyses for the current study. (Note: Data from the Fall 2014 focus group was integrated with results and used in interpretation in the discussion section). However, data from these other collection techniques were informative throughout the study. For example, a research assistant took field notes for the second eight-week SPAM group (early Fall 2015) during each group meeting and functioned as a participant-as-observer. Participants were aware that this researcher was studying them, and seated on the perimeter of the classroom during sessions, she took extensive field notes and noted factors such as attendance, session beginning and ending time, and participant responses to group activities. The principal researcher reviewed field notes after each session, which provided information regarding fidelity to intervention agenda and session content, participant reactions to intervention content, and contextual school factors influencing the experience of the group. This data was used to inform the planning and execution of subsequent groups and also provided context for experiences cited in post-intervention interviews.

Interviews. Interviews were used to provide in-depth information about how group members perceived the impact and experience of the SPAM group. A semi-structured interview method was chosen for its ability to facilitate analysis, comparison, validity checks, and triangulation, and for its ease of administration in case study research (Mills et al., 2010). A semi-structured approach also allowed for flexibility, providing participants space to share new thoughts with the researcher. Interviews were conducted with a total of 8 group members over the course of a year and a half and were held one to two weeks after the conclusion of each members' final SPAM group meeting.

Members indicated their willingness to be interviewed on short surveys given at the conclusion of the final session. Five interviewees were members of the second SPAM group (early fall 2015), one interviewee was a member of the third SPAM group (late fall 2015), and the remaining 2 interviewees were members of the fourth SPAM group (spring 2016). While quantitative data from the first SPAM group (fall 2014) was included in statistical analyses for the current study, interviews were not conducted with these members, as this group was a part of the pilot project, and more than a year had passed since its final session. Purposive sampling was employed with regard to multiple SPAM group representation, though SPAM groups were unequally represented due to factors such as group size (e.g. late fall 2015 group had only 3 members and only one indicated willingness to be interviewed) and scheduling conflicts. Attention was also paid to the recruitment of interviewees of diverse identities, though it was a challenge given the homogeneity of the participants. While the group members were overwhelmingly white, female novice teachers, one interviewee was an African American male. In addition, the interviewee ages ranged from 22 to 48 years old. Finally, the primary investigator made an effort to recruit and interview one of the few group members who consistently shared critical feedback after sessions in order to enhance the validity and trustworthiness of the research.

Interviewees were asked to describe their experience in the SPAM group, which was followed by questions regarding group culture and their perceptions of the group's impact on their professional and personal lives. Follow up questions were used to deepen and/or clarify participant responses. Questions asked in the interviews can be found the following section. The principal investigator conducted all interviews, which were conducted face to face in each teacher's classroom and ranged from 30 to 75 min in

length. During each interview, in addition to audio recording, the interviewer took field notes to capture key takeaways from each teacher's initial response to the questions.

Thematic analysis. A detailed account and analysis of interviews was conducted by the principal investigator using thematic analysis, an analytic approach used to identify and analyze themes across a dataset. Thematic analysis is a flexible approach, as it is not wed to a particular theoretical framework, and does not require the detailed technical and theoretical knowledge of other approaches (Braun & Clarke, 2006). Thematic analysis is particularly useful in case study research as it allows the researcher to conduct a thorough exploratory, descriptive, and/or explanatory analysis grounded in the specifics of the case (Mills et al., 2010). This approach not only allows but also encourages the researcher to cycle back through the data to revise codes, structure and display patterns of data, and refine themes (Braun & Clarke, 2006; Mills et al., 2010). Finally, thematic analysis was chosen because it is well suited for an inductive approach to coding, allowing for themes to emerge from group member interview data through the process of noticing patterns in responses (e.g. increased engagement with emotion) and attention to word-choice and labeling (e.g. "relationships", "non-judgment", "vulnerable").

Following protocol developed by Braun and Clarke (2006), this approach began with the collection and transcription of the 8 interviews. The principal investigator transcribed 6 interviews while research assistants transcribed the 2 remaining interviews. Interviews were transcribed without the use of computer software, because familiarization with the data is an important component of the first phase of thematic analysis, and manual transcription provided an opportunity to attend to information conveyed through interviewee tone and cadence.

The next step was to identify key ideas and concepts that formed the basis of an initial coding framework. As previously mentioned, the principal investigator recorded memos during the interview process, and the interpretive insights in these research memos were examined for broad codes prior to coding each of the eight interview transcripts. While these broad codes provided a general coding framework, data extracts from the interviews were identified and coded diversely, without trying to fit into a pre-existing coding frame. Concurrent with coding, data extracts were also labeled by type of response: outcome, process, content, or logistics of the group, which was helpful in detecting patterns across the set. Once data was coded, it was reread and recoded as necessary. Prevalence was determined at the interviewee level: code frequency was counted in terms of the number of interviewees who generated a response or responses aligned with a particular code. As such, codes were counted a maximum of eight times. Frequencies of codes within interviews were also noted; for example, three interviewees repeatedly mentioned codes related to emotion (e.g. awareness of emotion, emotional experiencing/acceptance). Next, categories of codes were generated based on code commonalities. Categories and the data within them were examined for patterns that suggested candidate themes.

Patterns within the data were identified via an inductive approach, as themes emerged from the data itself without attempting to fit them into a predetermined framework (Braun & Clarke, 2006). For example, existing theories about mindfulness and stress were not used in the development of data categories. After the set of initial themes was formed, they were reviewed, refined, combined, segmented, or discarded due to prevalence and/or pattern, and a thematic map was ultimately generated. The validity of individual themes and subthemes were reconsidered in relation to the dataset as a whole: interview transcripts and memos were reread to gauge alignment of data to the

refined themes. Prevalence of themes and sub-themes was also noted, and was determined at the unique interviewee level. When five or more interviewees mentioned a concept within a broad theme (e.g. Positive personal and professional impact), it was marked as a sub-theme, defined as "themes within a theme…giving structure to a particularly large and complex theme," (Braun & Clarke, 2006, p.22). Finally, themes were further refined, named, and defined and the thematic map was revised accordingly.

Validity. In addition to purposive sampling (described above), validity concerns were addressed though the following strategies: (a) disconfirming evidence, (b) reflexive journaling, (c) auditor review, and (d) triangulation. First, validity was addressed by looking for and tracking disconfirming evidence, or discrepant data that did not fit neatly within or even contradicted particular themes (Maxwell, 2013). Next, reflexivity was shown through the process of reflexive journaling, as the principal investigator logged notes, insights, and questions throughout the research process and continually consulted with the research team and assistants (Morrow, 2005). In addition, an auditor reviewed data classification, which included the initial codes, final codes, categories of codes, and the complete list of themes and subthemes to ensure their consistency with data extracts and interview transcripts. This auditor was a member of the principal investigator's research team who was familiar with the study's design and implementation, as she co-facilitated one of the 8-week SPAM groups and transcribed one of the interviews. Finally, the researcher employed triangulation, comparing themes to similar themes from recent, relevant research (Maxwell, 2013) as well as themes from theoretical frameworks used in the study (e.g. transactional models of stress, mindfulness).

Measures

Vulnerability to stress. The Classroom Appraisal of Resources and Demands (CARD) (Lambert et al., 2009) was developed to assess teachers' vulnerability to stress

by examining perceptions of a teacher's demands and resources. The CARD is divided into two scales: Demands and Resources. Items on each scale ask teachers to rate the severity of demands and the helpfulness of various resources associated with aspects of the classroom environment using a five point Likert scale that ranges from 1, "Not Demanding", to 5, "Extremely Demanding," and "Very Unhelpful," to "Very Helpful," respectively. The CARD assigns participants a "Demand" score and a "Resource" score. Following procedures used by Lambert (2009), classification of teachers using the CARD is accomplished by creating a score for each teacher based on calculating the difference between their total score for the Demands scale and their total score for the Resources scale of the measure. This "difference score" is labelled an Appraisal Index (AI) as it represents a teacher's overall appraisal of whether their classroom resources are sufficient to meet the magnitude of classroom demands. In this study, Appraisal Index scores were used to explore changes in vulnerability to stress. The CARD has been used in a number of studies with teachers across various grade levels (Lambert et al., 2006; McCarthy et al., 2009; McCarthy et al., 2010), and each study has demonstrated sample-specific reliability evidence and validity evidence for the CARD. In the current study, Chronbach's alpha for the demand scale was .863 (pretest) and .865 (posttest). Chronbach's alpha for the resources scale was .943 (pretest) and .866 (posttest).

Job satisfaction. Teachers were also given a 14-item Job Satisfaction scale, which was originally developed by Koeske and colleagues (1994) to assess human service workers' satisfaction along a range of dimensions (e.g., working conditions, organizational climate, salary, etc.). This measure asks participants to rate their satisfaction with each dimension on a seven-point Likert scale from 1, "Very Dissatisfied," to 7, "Very Satisfied". The scale was adapted by McCarthy, Lambert,

Crowe, and McCarthy (2010) for use with teachers. Cronbach's alpha for the current study was as follows: pre (.893), post: (.935).

Mindfulness. The Five Facet Mindfulness Questionnaire Short Form (FFMQ-SF; Baer, Smith, Hopkins, Krietemeyer & Toney, 2006; Bohlmeijer, Peter, ten Klooster, Fledderus, Veehof, & Baer, 2011) is a 24-item validated scale measuring five aspects of mindfulness that individuals may possess or acquire through mindfulness training and practice. While the items together do not measure a unidimensional mindfulness construct, the FFMQ-SF measures five unique but related aspects of mindfulness, which may be considered components of an overall mindfulness factor (Bohlmeijer et al., 2011). These facets include observing (attending to or noticing experiences such as sensations, emotions, cognitions, etc.), describing (noting or mentally labeling these experiences with words), acting with awareness (attending to one's current actions, as opposed to behaving automatically or mindlessly), non-judging of inner experience (refraining from evaluating sensations, cognitions, and emotions) and non-reactivity to inner experience (allowing thoughts and feelings to come and go without getting caught up in them). Responses are rated on a 5-point Likert scale ranging from "never or rarely true" (1) to "very often or always true" (5), with total scores ranging from 24 to 120 points. Consistent with procedures used in other mindfulness studies with teachers (e.g. Benn et al., 2012; Crain et al., 2016), a total mindfulness scale score was calculated at each time point based on the mean of these 24 items, and higher scores indicate higher degrees of mindfulness. Research indicates the FFMQ-SF is reliable and valid, with Cronbach's alpha for the subscales ranging from .75 to .87 (Bohlmeijer et al., 2011). In the current study, these scales were statistically reliable across time points with Cronbach's alpha for all subscales at pre and posttest ranging from .71 to .905.

Interview Questions. The following interview questions were asked in the order listed below:

1. Please describe your experience participating in the Stress Prevention & Mindfulness group.
2. How, if at all, has your participation in the SPAM group impacted you?
3. How, if at all, has your participation in the SPAM group impacted you as a teacher?
4. How would you describe the culture of the SPAM group?

Recruitment and Participation

This study aimed to recruit at least 35 participants from three public schools in Austin, Texas. The projected sample size was obtained by conducting an analysis to estimate the minimum sample size needed to obtain significant differences. A G-Power 3.1 analysis (Faul, Erfelder, Buchner, & Lang, 2009) indicated that at least 28 total participants would be needed to obtain a medium effect size of .25, and a power level of .80 with an alpha level of .05. However, 35 participants were sought in order to account for attrition, a pattern observed in the pilot study. Two groups were held with middle school teachers at charter schools; one was a part of the KIPP charter management organization and one was part of the IDEA charter management organization. The third and fourth SPAM groups were held at a public high school. Study participants who participated in the comparison condition for the statistical analyses were also teachers at these three schools. Those who did not wish to participate in the intervention but agreed to participate in the study were encouraged to complete pre and posttest measures in order to serve as a member of the comparison group. In addition, participants who attended less than half of the group sessions were also encouraged to complete both sets

of quantitative measures as their data was included as part of the comparison group for statistical analyses.

Teachers were made aware of the opportunity to participate in the SPAM group via their school administrators, during a professional development meeting prior to the study, and via email and fliers in staff workrooms. Investigators aimed to have at least 15 of the total participants participate as group members, though there was no limit to the number of teachers who could participate in the group. SPAM group member inclusion criteria was as follows: (1) current full-time employment as a teacher of any subject; (2) availability to attend all or most SPAM sessions; (3) willingness to engage in10-20 minutes of stress prevention or mindfulness-related activities in and outside of school each week; (4) agreement to complete a 10-15 minute online survey before and after the SPAM group.

While group participation was voluntary, efforts were made throughout the study to mitigate barriers to participation in the group and to encourage attendance, taking into account the unique context of each school. For example, after collaboration with school administrators, members of the fourth SPAM group (Spring 2016) were offered continuing education credits for attending at least 6 of the 7 sessions. Light refreshments were also provided during two groups (Fall 2015 and Spring 2016). In coordination with administrators, efforts were also made to best accommodate the logistical needs of teachers at each school in order to maximize participation. The two SPAM groups that were held at the charter middle schools were held in a group member's classroom and began at 4:30, immediately following student dismissal. The two SPAM groups held at the high school were held in the school counselor's office; one of the groups began at 4:00 while the other was held during teachers' lunch hour.

Two to three weeks after the conclusion of the final SPAM session, and after each group's posttest quantitative data was collected, a subset of members from each group was interviewed about their experience participating in the group. Group members indicated their willingness to be interviewed on a brief survey given at the end of the final session. The principal investigator followed up via email to these members, and interviewees were selected based upon member/investigator schedules and availability.

APPENDIX C. ADDITIONAL BACKGROUND ON RESULTS

Results

Quantitative Results

Preliminary analysis. Because contextual factors limited the use of random assignment to treatment and control groups, a natural comparison condition was compared to group members in the quantitative component of this quasi-experimental design. No statistically significant differences were found between the groups' characteristics and the study variables at pretest. Pretest differences between group members and comparison groups were assessed using independent samples t-tests, and there were no statistically significant differences in pretest scores between group members and comparison group members; thus the intervention and comparison conditions were considered equivalent.

Data were examined for skewness and kurtosis. The magnitude for all skewness and kurtosis was below 2, except for mindfulness posttest for non-members. This included all cases together and cases separated by group. To explore this, we used the Kolmogorov-Smirnov test of normality and this test was not statistically significant, indicating the distribution of this variable did not deviate from a normal distribution.

Relationships among variables. The investigators were also interested to see if there was a relationship between the dependent variables. Correlations between pre and post CARD Appraisal Index scores, demand and resource scale scores, mindfulness, and job satisfaction were examined. Pearson product-moment correlations were used to examine the relationships between CARD Appraisal Index scores, demand and resource scale scores, mindfulness, and job satisfaction at pre and posttest. Table 4 presents summary statistics for the correlations. Positive intercorrelations were observed between each pre and posttest measure of the same variable, and ranged from moderate (.47 for mindfulness; .48 for demands) to high moderate (.59 for appraisal index), to strong (.72 for resources; .78 for job satisfaction).

All correlations between appraisal index and demands and resources scales at both time points were statistically significant and moderately or strongly correlated in the anticipated directions. There was a notable increase in strength of the relationship; however, between appraisal index at posttest and demand score from pre to post (.36 to .83, respectively).

Consistent with research by McCarthy and colleagues (2015), higher teacher vulnerability to stress was related to lower job satisfaction among participants at both pre and posttest in this study. There were statistically significant, moderate, negative correlations between appraisal index scores at pretest and job satisfaction scores at both pre and posttest (-.29 and -.36, respectively). Likewise, there were statistically significant, moderate, negative relationships observed between appraisal index at posttest and job satisfaction at both times (-.47 pre; -.40 post). Job satisfaction at pre and posttest showed a statistically significant, moderate, positive correlation with resources at pretest (.33 and .34), while job satisfaction at both time points was more strongly positively correlated with resources at posttest (.60 and .57).

Interestingly, there was no statistically significant relationship between appraisal index and mindfulness at either time point. Mindfulness at posttest did; however, show a statistically significant, moderate, negative association with demand scores at posttest (-.36). Finally, there was no statistically significant relationship between mindfulness and job satisfaction at any time point.

Table 4: Correlations Between CARD Demands, Resources, Appraisal Index, Mindfulness, and Job Satisfaction

	AI (pre)	Dem (pre)	Res (pre)	Dem (post)	Res (post)	AI (post)	MF (pre)	MF (post)	JS (pre)
Demands (pre)	.74**								
Resources (pre)	-.73**	-.09							
Demands (post)	.41**	.48**	-.11						
Resources (post)	-.48**	.03	.72**	-.11					
AI (post)	.59**	.36*	-.48**	.83**	-.64**				
MF (pre)	-.05	-.01	.03	-.17	.02	-.14			
MF (post)	-.14	-.15	.05	-.36*	-.13	-.21	.47**		
JS (pre)	-.29*	-.11	.33**	-.18	.60**	-.47**	.12	.11	
JS (post)	-.36*	-.18	.34*	-.11	.57**	-.40**	.17	.09	.78**

Note: AI = CARD Appraisal Index score; MF = Mindfulness; JS = Job Satisfaction. $p <$ .05 (two-tailed); **$p <$ .01 (two-tailed).

Qualitative Results

Code Book. The following is a list of codes, their definitions, and examples from interview transcripts generated in phases 2-4 of the thematic analysis.

Use of SPAM skills in personal life

- Definition: Explicit mention of use of SPAM content/skills in personal life.

- Example: T6: (with wife) It was like, this is what we're gonna do. Were gonna close our eyes, were gonna relax, were gonna get in contact with your seat. I was saying those things! I was trying to mirror the things that you were saying because whenever you would say it, it would put my mind at ease.

Use of SPAM skills in professional life

With self

- Definition: Explicit mention of use of SPAM content in professional life. Interviewee indicates that content or skill was used independently, for the purpose of benefitting self.
- Example T1: In the classroom when I get upset, when I get to a point where I'm feeling strong emotions, whether sadness or anger or anxiety or stress or whatever it is, now I'm able to go "What am I feeling right now? Feel it, let it go."
- Example T3: Like, I had a heightened experience with a student and I came in here and I was going to have to see students so I just started to do the interval nostril breathing and it just dropped my blood pressure so that I could feel better about the situation and that really helped because I wasn't physically feeling the way that I had been like a minute before.
- Example T2: So just doing little things like everyday this week I've gone out in the courtyard and sat there for five minutes in the sun. Just during lunch, and then I come back up here and I help everybody I need to help.

With others

- Definition: Explicit mention of use of SPAM content in professional life. Interviewee indicates that content or skill was used in classroom or at school with others, for the purpose of benefitting others.
- Example: T1: I know when I talk to my students out in the hall sometimes, if they are having a really hard time or they are upset, I take them out in the hall and we talk and I'll tell them, "what are you feeling right now? It's ok to feel that way."
- Example T5: I did try to teach the breathing thing to some adult immigrants I teach at nights and they did not like it.
- Example T6: I use it with the kids now. So many times I'll have them close their eyes… I do a quote of the week. Since mindfulness started, my quotes have been more and more positive. I like to just focus on the positive things.

Awareness of emotion

- Definition: Reference to increased ability to attend to, awareness of, or to notice emotions.
- Example: T1: I know I struggled with being aware of my emotions before I started in the group. Especially on our first day when we were talking about what we were feeling when we did the head-heart-body scan. I had a really hard time saying what was in my heart. I could do like body and head, but I couldn't do the heart part very well and by the end I felt like it was very natural to connect those three together.
- T7: Before, I didn't even acknowledge it. And if I did acknowledge it, I just felt I should ignore [emotion] and said to myself "you need to push forward." So yeah, that's definitely a tool from the group. At least I wasn't consciously doing it and used to think stopping to think and acknowledge it, that that was hokey.

Describing/labeling emotion

- Definition: Noting or mentally *labeling* these experiences in some way.
- Example T1: I think that I wouldn't really acknowledge [the emotion] because I didn't really know what I was feeling. I wasn't good at recognizing that in myself…

Emotional acceptance/experiencing

- Definition: Reference to improvements in accepting emotions, willingness to experience them, not resisting or avoiding them, or "riding the wave" of emotion.
- Example: T1: I was able to realize I shouldn't feel anxious, or if I am feeling anxious just feel that emotion and let it go. I'm not keeping it in. I'm not bottling it up because I'm feeling that emotion.
- Example T5: Resistance times pain equals suffering. So like, if I'm resisting this [emotion] it's going to be like much more difficult for me…

Emotional expression/sharing

- Definition: Reference to improvement in sharing or expressing emotions/feelings with others professionally or personally.
- Example: T6: And this is – honestly this is the first time I've ever talked about anything like that with people. Like, you know as far as like my feelings (laughs), things that stress me out, how my body is feeling – things like that on my mind….Just talking about it – like having those sessions to talk about things was the biggest aspect to me. I just never talked like that – even with family I don't talk about how my mind and body is feeling. But now it has introduced me to those topics and I know how to open it up… Like my fiancé and I, we literally

talk about – and I'm not saying I'm a guy who never talked about my feelings – but now I'm a guy who can open it up.

Non-judging of emotion

- Definition: Reference to improvements in refraining from evaluating emotions, positively or negatively.
- Example T1: I think that also helped not judging my emotions realizing everyone feels these emotions, it's ok to feel this way and hearing other teachers say I feel anxious all the time, I feel like I'm racing constantly. I felt better hearing that realizing don't judge yourself you aren't the only teacher to feel this way, let it go.
- T4: …That you have emotions and you're entitled to having those emotions.
- T7: if you can imagine being on the opposite side of the spectrum: believing you can fully control your emotions. And I really did believe that! Like I said that to people like they had a weakness when they *didn't* control it. I realized after being in group how completely harsh that is, and obviously my husband didn't feel that way and he would be very offended by whatever I said beforehand too… And emotions I've always really downplayed. Even with my husband. I would say you CHOOSE how you're feeling. You CHOOSE to be happy. You know I didn't mean that in a hurtful way, you know I love you. You're CHOOSING to take offense when you don't have to. And I would very much make that about him – you're CHOOSING to feel hurt when you know I would never have hurt him on purpose. And that's how I used to talk to him sometimes. And I don't do that anymore. At all. I actually went home and told him what you said. And I was just like omg, I've never thought about it this way before.

Emotional release/letting go

- Definition: Participant references ability to let go of emotion, releasing of emotion, or lessening of emotional build up.
- T1: I was able to realize I shouldn't feel anxious, or if I am feeling anxious just feel that emotion and let it go.
- T6: I feel like stopping to talk about it is a way to not avoid things im thinking about, a way to not let them build up. Through those 8 weeks, honestly I didn't feel things building up.

Decreased Exhaustion

- Definition: explicit reference to the term "exhaustion", tiredness, or fatigue due to engaging with emotions instead of avoiding them.
- T1: Now I guess because I can process my emotions more it's a little less exhausting that when I go home I have energy to do things, like I'll take my dog for a walk now or I will go do things with friends in the evenings. I just feel like I have more energy I guess, less exhaustion.
- T8: Now I'm like dealing with it in the moment and it's a little embarrassing for a couple minutes, but then I get back on track and I feel a lot better at the end of the day. I don't feel like this exhaustion.

Noticing stress

- Definition: Participants referenced increased ability to notice or recognize stress or stressful moments.

- Example: T1: I guess I just feel like when I get to the point that I'm so stressed out I'm kind of internalizing it. I guess I'm better at recognizing that now.
- Example T2: …and I learned how to maybe recognize when I'm having a stressful moment and maybe its not a good time to talk about this right now.
- Example T4: I think through mindfulness I also learn to spot and then stop the stress cycle – notice when my wheels are turning and tell myself I can stop it. That I have options – like watching my thoughts on a leaf, watching the train go by, do the alternate nostril breathing.
- T8: I tend to like heat up a lot when I get stressed, and for the first time in my life I am recognizing those signs.

Coping with stress

- Definition: Participants referenced having or using tools or strategies to cope with stress in the moment or afterwards. (i.e. NOT prevention of stress).
- Example: T1: "I guess I think my stress and my work level is the same still, but I think that I feel it…maybe not that I feel it less but I process it a little bit better now. When I do start to feel overwhelmed and stressed I try to take a breath.
- Example T2: I think the group just taught me how to recognize when it's happening and then try to halt the cycle.
- Example T3: I told myself: don't worry, [alternate nostril breathing] is going to work – like, even if you have time, even if it's not a minute, just that little amount that you can do is going to help stop some of the racing.
- Example T4: I think through mindfulness I also learn to spot and then stop the stress cycle – notice when my wheels are turning and tell myself I can stop it.

That I have options – like watching my thoughts on a leaf, watching the train go by, do the alternate nostril breathing.

Responding vs. Reacting at Work

- Definition: Participant mentions a shift from reacting to situations automatically or impulsively to an ability to take a moment (to think, to breathe, to be still, etc.) before reacting, in order to choose a response.
- T1: I think that in the classroom when I get upset when I get to a point where I'm feeling strong emotions whether it's sadness or anger or anxiety or stress or whatever it is that I have I think now I'm able to go, "what am I feeling right now? Feel it, let it go." And that really helps I think making me more…not take it out on the students maybe? I think that's really helped my classes stay calmer cause I've been calmer in this process.
- T3: But, I think, taking moments, um, to really respond, or taking moments before responding, this has helped me. I think that in a way where instead of getting too caught up in my head, um, I'm feeling like I can take some space to ground myself on occasions. Like, little moments where I'm like, okay, I'm not going to respond right now I'm going to breathe.
- T4: And I think mindfulness has allowed me to incorporate a state of calmness before I react. Whereas before, if a situation happened, I would automatically start connecting, or sympathizing, or empathizing with the situation, putting myself in that persons place immediately, whereas now that I've been more exposed to mindfulness as a tool, instead of having that immediate emotional reaction, I'm allowed to have a little bit of down time.

Compassion for self

- Definition: Participant mentions increased self compassion, understanding or empathy or decreased comparison or criticism of self as a teacher in relation to colleagues.
- Example: T4: So I think teachers having mindfulness as part of their tool bag would dramatically impact teacher retention in terms of feeling appreciated. And recognizing the fact that you are not perfect. And that if you are not perfect, you are not a failure.
- Example T6: Remember the time you were talking about what it means to be a perfect teacher. Like teacher judgment I guess? And I remember in my head, all up until we did that mindfulness thing I've always been like "whoa – am I late on this? Oh snap, they're doing that, should I be doing that? Oooh am I a bad teacher?" and literally ever since we had that session I've never had those thoughts again as far as like stuff based on what other teachers are doing.
- T6: If mindfulness taught me one thing, it taught me to like slow down. And understand…I am a first year teacher, and it allowed me to understand that I don't have to get everything like perfect you know? In just us talking about it, and hearing what other people were going through, it was an opportunity for me to understand that, its progression, not perfection.

Compassion for colleagues

- Definition: Participant mentions decreased criticism or judgment of colleagues. May also mention increased compassion for colleagues.

- Example: T4: I recognize the emotions instead of being so critical of others before I respond. And so I think it's helped me be less judgmental of others and have more of a generic response.
- Example: T4: And then I started realizing that when I saw them in the hallways, it wasn't just a coworker, it was a person that had feelings – a person that was struggling, a person that also needed help and made themselves vulnerable. So in turn, it made me feel more compassionate, more at peace with myself knowing that I had also been vulnerable with them, and we kind of had like a reciprocal relationship as humans instead of coworkers.
- Example T5: So when I see other people and think "She's just lazy" it's like probably not. Probably there's more to it than that.
- T8: I think it's definitely made me feel more compassionate toward my coworkers… I went in to the group thinking mostly about myself, and I came out having a lot more empathy and compassion for the people who I bonded with in that group and feel like now when I see them I want to have that touch point where like I wanna say "Hey how are you doing? How's the stress level?"

Compassion for students

- Definition: Participant mentions increased sense of understanding, empathy, or compassion for students.
- T2: I just kept reminding myself, they're taking finals, they're stressed out, they're getting nervous, I need to understand that it's not their fault that they missed class. It's not their fault that these things happened to them. And try to help them without blaming them, without putting my personal stresses on them.

- T7: I have a 10yr old who is starting puberty and she's full of her own opinions and strong emotions now. And with her I've really been trying to, as well as with my students, to try to put myself back to being 10 yrs old or being 15 yrs old and remembering how incredibly important and all encompassing my emotions and opinions were to ME.

Sense of community among colleagues

- Definition: Participant mentions an increased sense of community among these colleague group members within and outside of the actual group.
- T1: I guess I feel more trust with these teachers now I feel like maybe if I'm having a hard time I can go talk to these teachers and we have this non-judgment way of talking and way of seeing each other now.
- T7: And to see that those people have similar stressors makes it seem like its more of a community and less of a "I'm the one who isn't doing my part or pulling my weight or handling the stress properly," or those sorts of things that pop up in our heads when we're not communicating with people.

Built/Strengthened Relationships

- Definition: Any reference to having built or strengthened relationships or connections with colleagues in the group.
- T1: I guess I felt especially toward the end we built a relationship, like a bond that I don't normally get to have with teachers at my school.
- T6: I think it was a great opportunity to strengthen relationships or create relationships with people. There was definitely a feeling of like joyfulness that would happen whenever it was like time for our circle.

- T7: I had an opportunity to forge some – what felt like closer relationships and closer comfort level with people from different departments that you barely interact with normally which was really nice.
- T4: And then at the end of the sessions, I started realizing I was having better connections with my colleagues…

Cohesion

- Definition: "A cohesive group is one in which all members feel a sense of belonging, acceptance, and validation." Participant mentions the word "cohesion" or speaks to the felt experience of belonging or being accepted by the group.
- T7: Cohesiveness is the first word that comes to mind. I feel like we are all invested in being on the same team – my department, those of us who were in the SPAM group. And those who are not in the department too…. So yes, we are interpersonally cohesive – not just professionally.
- T7: I now would say that the group is imperative. You need the group. Its kind of like when people talk about working out and having a workout partner: I went because they were there. I probably would have canceled had they not been there.
- T8: I feel like this job tends to feel really isolating and I think the group kind of forced us out of that isolation into like knowing what each other is struggling with and wanting to check in with one another.

Universality/normalization

- Definition: Participant mentions recognition of shared experiences and feelings among group members. May also then make reference to reduced isolation and/or increased validation.

- Example: T1: I think that also helped not judging my emotions realizing everyone feels these emotions, it's ok to feel this way and hearing other teachers say I feel anxious all the time, I feel like I'm racing constantly. I felt better hearing that; realizing don't judge yourself, you aren't the only teacher to feel this way, let it go.
- Example T2: It was nice to be able to, I guess like share experiences a little bit, know you're not alone, and learn about the stress cycle and types of things to watch out for.
- Example T3: Like, there were certain teachers, where the very first meeting we had I was just kind of like blown away by two of the, um, you know, seasoned professionals, um feeling so, um, stressed out. Just feeling like they were at their ropes and already and you know, that was kind of – it made me feel more human [laughter] because I didn't have that perspective before.
- Example T7: So it was nice to hear, even from people who I consider having it all together, they've been here forever, they're the leaders, sound human also. That was reassuring.
- T6: In just us talking about it, and hearing what other people were going through, it was an opportunity for me to understand that, its progression, not perfection.

Support/guidance

- Definition: reference to colleagues being supportive or helpful in some way. Ex: pushing their thinking, giving additional perspective, modeling, or learning from each other.
- T1: But anyways back to the group, I felt very supported too.
- T2: And I thought everyone was really good listeners! They really let everyone share and have their time to share. I felt like we supported each other pretty well.

- T6: Hearing that from my peers and not just reading it online from someone saying, "hey its not good to be that way." It was great to experience it with my other teachers.
- T7: Being in the group was eye opening because you get to see how other people think and feel, which I have limited exposure to just personal experience. So seeing my colleagues and seeing how they deal with maybe similar things in their lives – a lot of them are kind of embracing their emotions and have close relationships with their parents and stuff like that - and I was just like wow, ok that actually sounds better!... I think the group kind of helped me realize – sometimes it can be helpful to see people who are different from you too. And its nice to be affirmed when you hear these similar feelings, but also for me it was kind of eye opening to hear people who are handling things differently.
- T8: And so it was actually nice to have that [group member] be like "Hey, you may not be thinking this but here's something that that person's going through." And for me I was able to be encouraged to push through my negative thoughts about that person and *actually* do the exercise.

Humanizing each other beyond profession

- Definition: Participant mentions the positive experience of learning about colleagues as people beyond profession. References such as seeing them as "people" not just professionals (or "humanizing" them).
- T3: Teacher life was like, what kept us all similar, and we were meeting in the same area, but we were all like individual people in that group.
- T4: I think through the mindfulness, it was allowing them to be softer with one another and to see each other as humans, not necessarily as teachers and to allow

each other a little more grace in terms of knowing their background; what stresses them out; knowing that they have opened themselves up to be vulnerable.… I was recognizing my colleagues as people and it started humanizing them instead of them being Mr. So and So or Ms. So and So… we kind of had like a reciprocal relationship as humans instead of coworkers.

- T7: The head of our English department was in the group so it was really nice to have her open up a little, which she doesn't normally do as much. She tends to be a little more stoic than some of us who get together and BS it at lunch. So it was nice to have her hear us, but also nice to hear and feel like we were kind of at a human level, instead of seeing positions of a hierarchy within a department.
- T7: There's something that happens when people talk about their personal lives, family lives and what's important to them outside of work. You see them more as people and less as positions, and I think it makes it easier to get along as one of those positions within the massive machine. To realize, hey we're human, and instead of being afraid of how someone's going to react I should just be honest about what's going on.

Safe/comfortable, non-judgmental/accepting group culture

- Definition: Participant describes their experience using terms suggesting the group felt like a "safe" place to share openly.
- T1: Ok, I felt like the group was very non-judgmental. I felt very comfortable and safe in this group.
- Example T3: I really like having a third party person in the room that wasn't part of the school, whether that would be the social worker or a counselor or somebody who maybe isn't a teacher so that there's this more objective feeling of

sharing – like you can feel like you can share more, I think, because you created a really safe place, where it's like, oh you come and can be yourself.

- T6: At the end of the day, this was a time I could just ease my mind. You know a lot of us work after that, or maybe have to work before, but we know that this is a session where we could just relax and talk to our coworkers… everyone was able to say something; everyone was able to be heard; everyone's opinion mattered.

Vulnerability/ authenticity

- Definition: Participant describes their experience using terms such as "vulnerable", "authentic" or "genuine", or makes reference to sharing openly and honestly during the group.
- T1: I guess we all had to be a little vulnerable at times and be honest and truthful with each other and through that process I feel like we confided in each other and grew together
- T3: I think everybody was very vulnerable at points, um, and I definitely think that they came in as themselves, not as a KIPP teacher. Um, or as I am co-worker, they came in as themselves, which made it so much easier, I think to do things and be vulnerable and be open to um, the different practices we were learning about."
- T6: I think we were really open. I liked the fact that people were honest.
- T7: I think the culture was actually far more open, honest and accepting than I expected. I actually was looking around sometimes like waiting for people to be kind of like "no I'm not gonna do that."…Like the first time we were asked to close our eyes and go through the meditation I was just kind of looking around

like ok, are we gonna do this? Ok we're gonna do this. I was almost like waiting for group confirmation in the beginning. I didn't feel that way in the end.

- T8: I overwhelmingly get the sense that the group was very real and raw. I just felt like overwhelmingly people were like "here's my shit and here's what's going on in my life". At times I would be like oh, wow, I would be very embarrassing doing that, but they weren't, and that like invited me to the same. And so I really appreciated that honesty.

Enjoyed the experience

- Definition: Participant uses the following terms: enjoyed, liked, good, positive experience, looked forward to it, or another word or phrase with explicitly positive valence in describing their SPAM experience as a whole. (Code not to be used for reactions to specific activities or content).
- T1: I really enjoyed the whole process, it was a good experience.
- T5: My experience was positive… I think, as we've discussed I think it was positive socially as sort of like a camaraderie.

Valuable experience

- Definition: Participant describes the SPAM group/experience as a whole as: useful, helpful, valuable, "worth my time", beneficial, or met their expectations for what they hoped to get out of it.
- T1: The first one I was like I don't know if this is a waste of my time but it was, I really had…it was worth my time.

- T5: If there's a place on record where I can say I would absolutely advocate for this experience for teachers. If I was running the show, I would have required (the spam group) for teachers…I think it is very very very important…
- T6: I wish I could have attended them all. Because there was one session where in my head I was like wait! I missed that? I was disappointed I missed that.
- T7: Like also (speaks to) how important the material is that I'm missing, because I honestly felt like there was great value like every time. I would go home and tell my husband all about what we did, and he was really grateful for the group – like so much! (laughter) it worked out well for him I think (laughter).

Appreciation

- Definition: Participant spontaneously expresses appreciation or gratitude for the opportunity to participate, for the impact it made, and/or for creating an opportunity to address the needs of teachers specifically.
- T4: I think we should be extremely grateful to have been given this opportunity to have sessions on mindfulness just because I don't feel like teaching as a workforce receives the most trained employees when they come into this profession
- T7: I would go home and tell my husband all about what we did, and he was really grateful for the group – like so much! (laughter) it worked out well for him I think (laughter).
- T5: I'm very grateful that there's an approach towards specifying the quality of life during the day.

Table 5: Codes, Counts, Sub-themes, & Themes

<table>
<tr><td colspan="3">Research Question 1: How does an in-school stress prevention and mindfulness group intervention impact teachers?</td></tr>
<tr><td>Final Codes & Counts</td><td>Sub-theme</td><td>Theme</td></tr>
<tr><td>Used SPAM content/skills inside classroom (7)
• With self (6)
• With students (4)

Used SPAM content/skills at school, outside classroom (2)
• With self (1)
• With colleagues (1)

Used SPAM content/skills in personal life (6)
• With self (6)
• With family members (3)</td><td>Professional life</td><td rowspan="2">Utilization of content and skills outside of the group</td></tr>
<tr><td></td><td>Personal life</td></tr>
<tr><td>Notice Emotions (5)
Describe/label emotions (2)
Experience emotion (6)
Express/share emotion (2)
Not judge emotion (3)
Release/let go of emotion (4)

Perceived impact:
• Decreased emotional exhaustion (3)
• Better at handling student emotion (2)
• More refreshed/more energy/recharged (3)</td><td>Engagement with emotion</td><td rowspan="4">Positive personal and professional impact</td></tr>
<tr><td>Notice stress (5)
Cope with stress (6)</td><td>Engagement with stress</td></tr>
<tr><td>Responding vs. reacting (6)</td><td>Responding vs. reacting</td></tr>
<tr><td>Less self-to-colleague comparison (4)</td><td>Compassion for self, colleagues, and students</td></tr>
</table>

Table 5: continued

Less colleague criticism (5) Increased compassion for students (3)	Compassion for self, colleagues, and students	Positive personal and professional impact
Built/strengthened relationships (7) Sense of community among colleagues (5)	Strengthened relationships with colleagues	
RQ2: How do participants in the Stress Prevention & Mindfulness Group describe their experiences?		
Final Codes & Counts	**Sub-theme**	**Theme**
Positive/enjoyed experience (8) Valuable experience (8) Appreciation (5)	N/A	Positive, valuable experience
Cohesion (7) Universality/normalization (5) Support/guidance (6) Safe, comfortable, non-judgmental group culture (6) Vulnerability, honesty, authenticity (6) Humanizing each other beyond profession (5)	N/A	Being in a group with colleagues was therapeutic

APPENDIX D. REVIEW OF PILOT STUDY

Purpose

In the fall of 2014, the current researcher designed and conducted a preliminary teacher SPAM group with a group of middle school teachers at a public charter school in Austin, Texas in order to better inform the design and feasibility of the current study. The researchers were in contact with the school district, seeking to combine psychoeducation on stress with mindfulness strategies, facilitated within the school setting. Congruent with

the current study, the purpose of the SPAM group was to explore whether efforts to educate teachers on stress, stress management, and mindfulness could impact teachers' vulnerability to stress and overall job satisfaction. We anticipated that participation in the group would improve levels of job satisfaction and reduce teachers' vulnerability to stress.

Methods

The preliminary evaluation of the SPAM group included exploration of quantitative outcomes on self-report measures coupled with a qualitative analysis of a post-intervention focus group. Teachers participated in a six-session structured group, which provided psychoeducation on stress and stress management for teachers and incorporated elements of MBSR. Group meetings varied in content but generally contained psychoeducational components, such as the physiology of stress and research on stress in educational settings. Each meeting also included experiential activities to synthesize psychoeducational material and to practice mindfulness techniques (i.e. body scan; mindful sitting; three-minute breathing space).

One psychologist and two counseling psychology doctoral students facilitated the SPAM group. The group facilitators had been active in mindfulness and/or meditation or yoga practices from 1-5 years. The principal investigator adapted and revised the intervention and lead-facilitated the group. This researcher had experience using mindfulness practices with groups in clinical settings and had five years' teaching experience and six years in teacher support and development. The psychologist specialized in teacher stress and teaching and research in group work. The first two sessions were delivered in a lecture format, during which facilitators stood to present new information and activity instructions while participants sat at classroom tables and desks facing the facilitators and their PowerPoint slides. Beginning in session three, the

facilitators decided to conduct the group in a circular format with facilitators and group members seated facing one another.

Measures of teachers' vulnerability to stress, job satisfaction, and mindfulness were compared at pre and post intervention times against a group of teachers from the same school who did not participate using one-way analysis of variance. Additional sources of data included "exit surveys" collected after each session. Two weeks after the conclusion of the intervention, a one-hour focus group was held with group members, which was subsequently analyzed for major themes. The focus group was used to explore participants' perceptions of the benefits, challenges, and impact of the group experience.

Pilot Evaluation

Participants who attended more than half of the sessions were considered "group members" for the statistical analyses. Group member attendance varied significantly from session to session and declined over the course of the intervention. As displayed in Table 2, there was a sharp drop in session attendance after the initial session, followed by a slight decline from sessions two through four. Teachers who attended no sessions or fewer than half of the sessions were considered participants in the "comparison" group. Using this cut off, group members included eight male and female teachers of various racial backgrounds, aged 22-39. A total of eight teachers were considered "group members" in the pilot study, though one group member did not complete the post-intervention quantitative measures and was excluded from the statistical analysis (N=7). A total of eight teachers who did not attend four or more SPAM group sessions but who completed both pre and post measures served as the comparison group (N=8). These participants' quantitative data was included in statistical analyses in the current study.

Group member scores on the Classroom Appraisal of Resources & Demands (CARD), the Five Facet Mindfulness Questionnaire, and a measure job satisfaction were examined pre and post intervention. Results of these measures were also compared to teachers who opted not to participate in the sessions or who attended three sessions or less. While there were no statistically significant differences between group members (N=7) and their colleagues (N=8) on any of the measures from time one to time two, the mean scores (displayed in Table 6) for job satisfaction were promising, showing positive trends only for the teachers who completed the intervention.

Table 6: Pilot Mean Differences by Group Membership

Measure		Group Member *N*=7	Non-Group Member *N=8*
Pre Job Satis	Mean	81.57	81.13
	SD	6.53	15.64
Post Job Satis	Mean	88.57	79.50
	SD	4.04	10.34

While statistical analyses of quantitative measures did not yield statistically significant results, as previously mentioned, job satisfaction changed for the participants in the predicted direction. It is important to consider the possibility of Type II error, as a larger sample size in the current study will increase power to find statistically significant changes between or within groups on these measures. Analysis of field notes, exit surveys, and focus group data, discussed below, indicate teachers perceived that they benefitted from participation in the group, further suggesting the possibility of finding statistically significant differences in a larger sample.

Exit surveys included space for teachers to rate session content and provide open-ended feedback. As shown in Table 2, teachers rated the utility of the session, how well mindfulness as a stress reduction strategy "fit" for them, as well as their feelings of readiness and motivation to practice the strategies presented. Teachers rated their responses to these questions on a five point Likert scale ranging from "Strongly disagree" to "Strongly agree." As shown in Table 7, teacher ratings ranged from 3.82 to 4.75, increasing consistently over the course of the intervention. Data suggests that teachers found the sessions useful and mindfulness a "good fit" from the outset. Indeed, the largest growth in ratings was found in participants' feelings of readiness and motivation to practice the techniques, which increased from an average of 3.84 after the first session, to 4.5 after the sixth and final session.

Table 7: Exit Survey Data – Fall 2014 Pilot

Session	Participants	Participants who completed homework	Mean score	Mean score	Mean score
			This session was useful to me in my role as a teacher	Mindfulness as a strategy to manage job-related stress is a good fit for me.	I am ready and motivated to practice the techniques presented today.
1	20	N/A	4.15	4.16	3.84
2	11	1	4.45	4.18	3.91
3	13	5.5	4.54	4.38	4.62
4	10	6	4.5	4.3	4.25
5	6	5	4.5	4.33	4.33
6	5	3	4.75	4.5	4.5

Open-ended comments on exit surveys suggested that teachers were engaged and interested throughout the duration of the intervention. For example, after the first session one teacher wrote on his or her exit survey, "What happens if you don't feel like you're stressed, but maybe you really are?" while another noted, "I love that you forced me to

concentrate on myself." After sessions two, three, and four, teachers wrote (respectively), "I really thought mindful sitting was practically relevant. Thank you," "I enjoyed learning how to embrace negative thoughts," and "3min breathing space was excellent!" Exit survey data also suggested that teachers wanted to continue practice with the strategies, as evidenced by the following feedback from sessions five and six, respectively: "Please give details so we can continue after you're gone," and "this has been really helpful for me."

Investigators were also interested in teachers' experiences in the SPAM group. As such, investigators arranged a one-hour focus group to take place two weeks after the final group meeting. A member of the investigators' research team who was unfamiliar to the participants led the focus group. The qualitative analysis of the focus group transcript suggested teachers perceived that they benefited from their participation in the group, citing an increased feeling of community and support among colleagues. Eight participants attended this focus group, during which they were asked to respond to the following questions:

1. What did you find most helpful about the mindfulness sessions?
2. What did you find least helpful about the mindfulness sessions?
3. To what extent were you able to do the practice homework suggested after each session? To what extent was the homework helpful?
4. How, if at all, has mindfulness impacted your role as a teacher?
5. What other suggestions do you have for us if we are able to give these sessions to other teachers in the future?

Researchers transcribed and examined the responses to the open-ended questions using consensual qualitative research (Hill, et al., 1997). Members of the research team were asked to review the transcript and identify codes (e.g. frequency of sessions) within

each superordinate category (e.g. challenges). Researchers identified codes as ideas that occurred frequently and tended to be mentioned by more than one participant. The team created a collective inventory of codes, broken into domains based upon the five focus group questions. Of particular interest in designing the current study were teacher responses to questions 1 and 5. Core ideas in response to question 1 included (but were not limited to): validating/normalizing teacher stress, group format, stress reduction, mutual support, and community building. Core ideas in response to question 5 suggested that teachers wanted more sessions, more time in sessions, and resources for support after the conclusion of the SPAM group. A full list of domains and associated codes can be found in Table 8.

Reactions to the teacher stress and mindfulness group were overwhelmingly positive at both the teacher and administrator level. In fact, an administrator from the charter network at large had a chance to sit in on the second session of the group, after which she expressed interest in having the network's teacher coaches engage in the session material in an effort to increase their ability to support and develop the teachers in their regions. After the intervention's fifth session with teachers, this administrator brought five teacher coaches from across the state to the school, and facilitators conducted a two and a half hour condensed version of the intervention.

Table 8: Focus Group Domains and Codes – Fall 2014 Pilot

Domain	Core ideas
Helpful (actual sessions or session content)	• Time to reflect (think about things more deeply) • Stress reduction • Labeling thoughts and feelings/new vocab • [De]identification with thoughts and emotions • Variety of strategies • Mindfulness strategies • Group format • Community building

Table 8: continued

Domain	Core ideas

Challenges	• Timing of sessions during the day
	• Frequency of sessions
	• Session one and two discomfort
	  • Presenters are strangers
	  • Body scan
	  • Silence is uncomfortable
	• Session one and two repetitive
	• Conflict between doing this workshop and teaching responsibilities
	• Could not put it in a personal context
	• Arrangement of chairs in session
	• Buy-in earlier

Homework	• Finding time to do HW • Easy to do at school • Easy to do at home • Hard to do at school • Hard to do at home • Want to relax instead • Mindfulness strategies were more difficult than worksheets • Awkward to do in session at first • Mindful communication homework • Unpleasant thoughts homework

Impact	• Cognitive and emotional processing in stressful situation
	• Community-building
	  • Secondary gains from community building
	  • Relief from depressive symptoms
	  • Less isolation during the school day
	• Mindful communication
	  • In the classroom
	  • Empathy
	• Reduce perfectionism
	• Personal life
	• Turn-key skills to students

Suggestions	• Individualized attention • Post-workshop community • Snacks • More time • More sessions • Change order of activities • Earlier thought identification • Resources for support after the intervention

APPENDIX E. MEASURES

Classroom Appraisal of Resources and Demands

Using the scale below, rate how demanding you find each of the following.

1 = Not Demanding 2 3 = Somewhat Demanding 4 5 = Very Demanding N/A = Non Applicable						
35. Number of students in the classroom or number of students taught per day.	1	2	3	4	5	NA
36. Working with students from homes in which English is not the primary language.	1	2	3	4	5	NA
37. Working with students who are performing below grade level.	1	2	3	4	5	NA
38. Working with students who have Individualized Education Plans (IEPs).	1	2	3	4	5	NA
39. Working with students who have physical disabilities.	1	2	3	4	5	NA
40. Working with students who are gifted, talented, or academically advanced.	1	2	3	4	5	NA
41. Homeless or transient students.	1	2	3	4	5	NA
42. Students with poor attendance.	1	2	3	4	5	NA
43. Students who are chronically late.	1	2	3	4	5	NA
44. Working with students and families from diverse cultural backgrounds.	1	2	3	4	5	NA
45. Students with problematic behaviors (not following directions, disrupting class, etc.).	1	2	3	4	5	NA
46. Test preparation.	1	2	3	4	5	NA
47. Hours spent at work/hours spent beyond required working hours.	1	2	3	4	5	NA
48. Pace of daily schedule.	1	2	3	4	5	NA
49. Paperwork or administrative requirements (attendance records, report cards, data input).	1	2	3	4	5	NA
50. Administrative disruptions to the daily schedule (assemblies, fire drills, classroom phone)	1	2	3	4	5	NA

51. Lack of physical classroom space.	1	2	3	4	5	NA
52. Classroom environment conditions (heating, cooling, lighting, etc.).	1	2	3	4	5	NA
53. Lack of instructional resources (teacher guides, professional development workshops,coaches, mentor teachers, etc.)	1	2	3	4	5	NA
54. Lack of instructional materials (books, manipulatives, literacy centers, maps, science materials, etc.)	1	2	3	4	5	NA
55. Lack of instructional supplies (consumable materials such as pencils, paper, markers, chart paper, crayons, access to copy machines).	1	2	3	4	5	NA
56. Lack of classroom technology (computers, software, printers, SmartBoards, etc.).	1	2	3	4	5	NA
57. Outdated or worn out instructional materials.	1	2	3	4	5	NA
58. Using your own personal money for classroom resources, materials, or supplies.	1	2	3	4	5	NA
59. Time and effort spent working with protégé teachers (teachers you are mentoring).	1	2	3	4	5	NA
60. Meetings and/or trainings you are required to attend.	1	2	3	4	5	NA
61. Time spent performing non-teaching-related duties (monitoring bus, cleaning, lunch duty duty, etc.).	1	2	3	4	5	NA
62. Summative, formal, or school/state-mandated testing and assessments.	1	2	3	4	5	NA
63. Formative assessments (quizzes, portfolios, performance assessments, observation notes, other teacher ratings of student achievement).	1	2	3	4	5	NA
64. Grading student work.	1	2	3	4	5	NA
65. Planning (lesson, unit, or long term).	1	2	3	4	5	NA
66. Setting up the classroom and materials for instructional activities.	1	2	3	4	5	NA
67. Unexpected changes to your daily or weekly schedule.	1	2	3	4	5	NA
68. Changes to expectations of job performance.	1	2	3	4	5	NA
69. Working with a co-teacher (you share the same roster).	1	2	3	4	5	NA
70. Working with teaching assistants or paraprofessionals assigned to your classroom.	1	2	3	4	5	NA

71. Working with parents.	1	2	3	4	5	NA
72. Working with administrators.	1	2	3	4	5	NA
73. Working with other teachers.	1	2	3	4	5	NA
74. Students who use non-standard English common to their cultural group in assignments.	1	2	3	4	5	NA
75. Experiences in the classroom when your own racial, ethnic, or SES background is different than most of the students.	1	2	3	4	5	NA
76. Comments from students about your own cultural identity.	1	2	3	4	5	NA
77. Students who make ethnic and racial slurs or other derogatory comments about certain groups (i.e., "That's so gay," "Retarded," "Indian giver," etc.)	1	2	3	4	5	NA
78. Dealing with parents who feel their child may be taught, evaluated, or disciplined differently because of the child's race or ethnicity.	1	2	3	4	5	NA
79. Who question or make assumptions about your race or ethnicity during a phone conversation or other interaction.	1	2	3	4	5	NA
80. Responding to colleagues' disparaging remarks about your racial or ethnic group.	1	2	3	4	5	NA
81. Overall how demanding is your job on a daily basis this academic school year?	1	2	3	4	5	NA

Using the scale below, rate how helpful each of these resources is with classroom and teaching responsibilities.

1 = Not Helpful 2 3 = Somewhat Helpful 4 5 = Very Helpful						
82. Aides, assistants, and/or paraprofessionals.	1	2	3	4	5	NA
83. Parent support (volunteers) in the classroom.	1	2	3	4	5	NA
84. Parent support of school learning activities (field trips, providing extra	1	2	3	4	5	NA
85. Parent support of learning activities at home (homework, enrichment	1	2	3	4	5	NA
86. Adult mentors from the community.	1	2	3	4	5	NA
87. Administrators at your school.	1	2	3	4	5	NA

88. Office staff at your school.	1	2	3	4	5	NA
89. Department Chairs or Grade Team Leaders	1	2	3	4	5	NA
90. Support personnel for students with Individualized Education Plans	1	2	3	4	5	NA
91. Support personnel for students with physical disabilities.	1	2	3	4	5	NA
92. Support personnel for gifted or talented students.	1	2	3	4	5	NA
93. Support personnel for students with limited English skills.	1	2	3	4	5	NA
94. Support personnel for working with students from diverse cultural	1	2	3	4	5	NA
95. Support personnel for students with problem behaviors.	1	2	3	4	5	NA
96. Support personnel for students performing below grade level.	1	2	3	4	5	NA
97. Support personnel for computers and instructional technology.	1	2	3	4	5	NA
98. Counselors, school psychologist, family services or social workers.	1	2	3	4	5	NA
99. Special area or enrichment teachers.	1	2	3	4	5	NA
100. Teachers who are your peers.	1	2	3	4	5	NA
101. Mentor teachers (teachers mentoring you).	1	2	3	4	5	NA
102. Staff development workshops and programming.	1	2	3	4	5	NA
103. Materials for students with learning disabilities.	1	2	3	4	5	NA
104. Materials for students with physical disabilities.	1	2	3	4	5	NA
105. Materials for gifted or talented students.	1	2	3	4	5	NA
106. Materials for students with limited English skills.	1	2	3	4	5	NA
107. Materials for students from diverse cultural backgrounds.	1	2	3	4	5	NA
108. Materials for students with problem behaviors.	1	2	3	4	5	NA
109. Materials for students performing below grade level.	1	2	3	4	5	NA
110 Instructional resources (teacher guides, professional development, coaches, mentors, etc.)	1	2	3	4	5	NA
111. Instructional materials (books, literacy centers, manipulatives, science materials, etc.).	1	2	3	4	5	NA
112. Instructional supplies (consumable materials such as pencils, paper, markers, chart paper pape crayons, access to copy machines, etc.).	1	2	3	4	5	NA
113. Planning or preparation periods.	1	2	3	4	5	NA
114. Amount of time you have in each planning or preparation period.	1	2	3	4	5	NA
115. Overall, how would you rate the resources available to help you with the demands of your classroom?	1	2	3	4	5	NA

Five Facet Mindfulness Questionnaire – Short Form

Below is a collection of statements about your everyday experience. Using the 1–5 scale below, please indicate, in the box to the right of each statement, how frequently or infrequently you have had each experience in the last month (or other agreed time period). Please answer according to what really reflects your experience rather than what you think your experience should be.

	Never or rarely true	Not often true	Sometimes true, sometimes not true	Often true	Very often or always true
I'm good at finding words to describe my feelings.	1	2	3	4	5
I can easily put my beliefs, opinions, and expectations into words.	1	2	3	4	5
I watch my feelings without getting carried away by them.	1	2	3	4	5
I tell myself I shouldn't be feeling the way I'm feeling.	1	2	3	4	5
It's hard for me to find the words to describe what I'm thinking.	1	2	3	4	5
I pay attention to physical experiences, such as the wind in my hair or sun on my face.	1	2	3	4	5
I make judgments about whether my thoughts are good or bad.	1	2	3	4	5
I find it difficult to stay focused on what's happening in the present moment.	1	2	3	4	5
When I have distressing thoughts or images, I don't let myself be carried away by them.	1	2	3	4	5
Generally, I pay attention to sounds, such as clocks ticking, birds chirping,	1	2	3	4	5

or cars passing.					
When I feel something in my body, it's hard for me to find the right words to describe it.	1	2	3	4	5
It seems I am "running on automatic" without much awareness of what I'm doing.	1	2	3	4	5
When I have distressing thoughts or images, I feel calm soon after.	1	2	3	4	5
I tell myself that I shouldn't be thinking the way I'm thinking.	1	2	3	4	5
I notice the smells and aromas of things.	1	2	3	4	5
Even when I'm feeling terribly upset, I can find a way to put it into words.	1	2	3	4	5
I rush through activities without being really attentive to them.	1	2	3	4	5
Usually when I have distressing thoughts or images I can just notice them without reacting.	1	2	3	4	5
I think some of my emotions are bad or inappropriate and I shouldn't feel them.	1	2	3	4	5
I notice visual elements in art or nature, such as colors, shapes, textures, or patterns of light and shadow.	1	2	3	4	5
When I have distressing thoughts or images, I just notice them and let them go.	1	2	3	4	5
I do jobs or tasks automatically without being aware of what I'm doing.	1	2	3	4	5
I find myself doing things without paying attention.	1	2	3	4	5
I disapprove of myself when I have illogical ideas.	1	2	3	4	5

Job Satisfaction Questionnaire

Using the scale below, rate how ***satisfied*** you are with each of the following aspects of your current teaching job.

1 = Very Dissatisfied 2 = Dissatisfied 3 = Slightly Dissatisfied 4 = Neither Satisfied or Dissatisfied 5 = Slightly Satisfied 6 = Satisfied 7= Very Satisfied

1. Working with students.
2. The amount of authority or autonomy you have been given to do your job.
3. Your salary and benefits.
4. Opportunities for promotion.
5. The challenge your job provides.
6. The quality of supervision you receive.
7. Chances for acquiring new skills.
8. Amount of student contact.
9. Opportunities for really helping people.
10. Clarity of guidelines for doing your job.
11. Opportunity for involvement in decision-making.
12. The recognition given your work by your supervisor.
13. Your feeling of success as a professional.
14. Field of specialization you are in.

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